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ABSTRACT

Three case studies were made of collaborative networks involving one university and surrounding school districts. One involved a well established network developed by a private university, while two others were associated with state universities. Of these two, one involved bilateral relations between the college of education and each of five counties to establish a teacher center for which there would be shared governance and financial support; the other involved the creation of a federation of teacher centers, many associated with small state colleges, and loosely coordinated by an office at the state university. This report presents a comparison and synthesis of these three cases. Part one describes the design and functions of school-university collaboratives. The background and scope of the present study are described in part two, and the methodology of the study is explained in part three. In part four, a history of the development of the collaboratives is traced. Part five describes the initial operations of the collaboratives and notes their present configurations. Organizational relationships are presented in the sixth part. An analysis and summary of their outcomes is offered in part seven. A causal analysis of the work of the collaboratives is presented in part eight. The ninth part examines the conclusions reached in the study on the nature of interorganizational arrangements, and the tenth part lists implications from the study. It is concluded that productive school-university collaboratives can be established economically, yielding substantial benefits to both participants. (JD)

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ED225971

SCHOOL-UNIVERSITY COLLABORATION SUPPORTING SCHOOL IMPROVEMENT

Volume IV

COMPARISON AND SYNTHESIS OF THREE CASES

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November 1982

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ABSTRACT

To develop an understanding of the potential role of universities in school practice improvement, three case studies were undertaken of collaborative networks involving one university and a surrounding set of school districts. One involved a prestigious private university which had begun developing its network over 40 years ago. Two others were associated with state universities. One in an eastern state involved bilateral relations between the college of education and each of five counties to establish a teacher center for which there would be shared governance and financial support. This 14 year old arrangement was originally intended primarily as a vehicle to rationalize the placement and supervision of student teaching but has evolved into a mechanism for in-service training and problem-solving. The third network, situated in a sparsely populated state in the upper midwest, involved the creation of a federation of teacher centers, many associated with small state colleges, and loosely coordinated by an office at the state university which administered a five year founding grant from a private foundation. All three networks had been operating successfully for more than three years, all were directed toward the improvement of school practice and none appeared to depend on federal funding.

A comparison of the three networks on a number of dimensions revealed a number of common features. It was discovered that each had an extensive pre-history of informal university-school links. Each was fortunate enough to have had charismatic and energetic leadership at crucial stages of its development. Each was founded on diverse objectives which resulted from high responsiveness of arrangement staff to the needs of school personnel. A variety of activities combined with school support led to high levels of participation and substantial outcomes in terms of increased status, new and strengthened linkages, knowledge transferred, and improved practice and school capacity. Long term continuation of these arrangements appeared to depend upon continued resource commitment by both the univerwity and the districts, continued evidence of positive outcomes for schools and teachers, the extent to which activities were deemed a priority to the schools and to the university, and the extent to which strong informal and formal linkages had been established.

It is concluded that productive school-university collaboratives can be established at reasonable cost, yielding substantial benefits to schools and to universities. Such arrangements do not appear to require a high degree of pre-planning or formalization of structure to be successful. Nevertheless, documentation of their activities and outcomes would appear to be relevant to their transfer as models to other settings and to any efforts at systematic improvement of those that are currently operational. University-school collaboratives could also be considered as either alternative or supplemental mechanisms for state-wide and nation-wide diffusion of validated practices and research knowledge to public school personnel.

ACKNOWLEDGEMENTS

Primary responsibility for the writing of this final volume has belonged with the principal investigator. However, he wishes to acknowledge contributions from the authors of two of the three previous volumes, Nanette Levinson who prepared the Eastern State study, and especially A. Michael Huberman who prepared the Midwestern Case which provided a model for all the others to follow. Huberman introduced the concept of the "causal network" and proposed the general model of variable interactions (page 228) which has helped to structure this synthesis. Cox and Huberman provided initial draft material for Parts One through Eight. Levinson also provided draft material for Parts Five and Six. Helpful comments were made on the draft volume by Naida Bagenstos and Ward Mason of the NIE staff.

Our editorial policy called for changing the names of all actors in each of the case studies; in most ways this was regrettable in that the impressive achievements of these educational innovators are not properly acknowledged. Readers who would like to be put in touch with any of these creative people are urged to contact the principal investigator at 1308 4th St. SW, Washington, D.C. 20024, tel (202) 554-9434.

INTERORGANIZATIONAL ARRANGEMENTS AS AN APPROACH TO EDUCATIONAL PRACTICE IMPROVEMENT

Executive Summary

1. Scope of the Study

In the past half-century, colleges of education have intensified their functional connections with local school systems in the USA. While most of these links have involved the pre-service or graduate training of school personnel, there have also been collaborative efforts to improve instructional practices and the problem-solving capacity in surrounding school districts. What has been the impact of these cooperative efforts? Have they resulted in improved local performance? Have college-level instruction and research profited from continous contact with the world of educational practice? Finally, are some formulae for carrying on college of education-school district collaboration more productive than others?

An 18-month exploratory field study was designed to look more intensively into these questions. Three interorganizational arrangements were selected, each linking a college of education with a set of school districts. The cases varied on several dimensions of interest: age of the arrangement, interorganizational structure (ranging from the top-down "corporate" structure to a more lateral "federation" of members), location, nesting of the linking unit within the arrangement and type of university (private university, large state university, small community college). What each of these interorganizational arrangements had in common was the strengthening of previously existing weak ties through a formally codified procedure for jointly managing and funding a set of activities. Having been in operation for at least four years, each of the cases was also assumed to be stabilized if not fully institutionalized. Finally, none of the cases involved dependence on federal funding for its core operations.

Two broad fields of inquiry oriented the design and conduct of the study. First, interorganizational theory, with its emphasis on the exchange of resources between member units and the consequent shifts in power and dependency, provided an organizationally dynamic framework for analyzing the evolution of the arrangement, its interactional patterns and its structural determinants. Using this framework, school districts and colleges of education were seen to carry on a series of transactions, striking several organizational "bargains" around the provision of knowledge-based resources. Knowledge transfer theory then illuminated the flows of knowledge and other resources between the college, intermediate unit, and school districts making up the interorganizational "field." This framework also highlights boundary-spanning and other formalized linkage roles that connect knowledge producers to knowledge users. The integration of these two conceptual approaches allowed us to assess the degree to which different interorganizational arrangements can affect ongoing efforts to improve local practices by providing knowledge-based resources which are otherwise unavailable.

2. Design and Methodology

Each of the three arrangements constituted a case. Each gave rise to a narrative-analytical case study using common methodological procedures in order to facilitate cross-case analysis. Within each case, sub-units were selected for intensive study. At the Eastern State and Midwestern State sites, we examined two teacher centers linking the college of education with a set of local schools. At the Eastern Private University site, major collaborative projects (e.g., a writing consortium) were selected as the sub-unit of analysis. At a still more micro-analytic level, each case comprised a series of mini-case studies of topical or significant institutional events. These were call "serials." Each serial described the life history of either a substantive event (e.g., organization of an action research project) or an organizational event (e.g., the addition of a new district to the arrangement). Events were tracked from their origins to their outcomes, with special focus on exchange and bargaining issues, flows of craft and "scientific" knowledge and boundary-spanning functions. The technique proved to be a powerful device for laying bare the mechanisms driving and constraining the arrangement as a whole.

Data were collected over a 12-month period through a series of site visits, totaling 15-16 days on site. Most data were collected through semi-structured interviews covering the principal research questions, with back-up from on-site observations, documents, weekly activity logs filled out by key informants, reports of communications relationships between members (using a standard form) and, at two sites, reports and predictions generated by on-site consultants. Transcribed field notes for a site totaled approximately 400 pages, the bulk of them in the form of multiple interviews with key actors and target publics of the arrangement. Interviews were progressively focused on key issues that appeared to govern knowledge flows, interactions, and outcomes at the site. Using procedures adapted from investigative social research, interviews then focused on these issues while casting a wider net of informants until the most detailed, plausible, and independently confirmed account was obtained.

Data analysis entailed the use of an elaborate coding scheme derived from the principal research questions. Coded segments were then analyzed and reported for each category of research question using text along with a standard matrix, figure or table across the three cases. Cross-case analysis has involved matrix and figure comparisons, then the creation of a meta-matrix or another data-reductive device to compare findings at each site. A list of approximately 35 common variables was drawn up to generate causal flow charts for the three sites, which could then be compared to isolate "streams" of antecedent and intervening variables leading to the principal outcomes.

3. Overview of the Three Cases

3.1 Eastern State University Site. The Eastern State University through its approximately 14-year-old Office of Field Experiences (OFE) was involved in two levels of interorganizational arrangement. The first level centered on the formal interorganizational agreements between the Office of Field Experiences and five school districts in its region. Under the leadership of the Director of OFE, there were monthly meetings during the school year with representatives of teacher centers and other collaborative programs created in the agreements with the five sites, faculty liaison personnel, and other IOA staff. At these meetings and at special workshops also sponsored by OFE, participants shared ideas and problems with one another, reported on continuing projects, listened to invited speakers from the university and elsewhere, and handled organizational business in what informants judged to be a relaxed and supportive manner.

Within this larger collaboration among organizations, the teacher center in Cardon County and the three teacher centers in Hanburg County were examples of formal interorganizational arrangements at the second level. A full-time coordinator, jointly selected and paid by OFE and the county, headed each teacher center. In Cardon County the teacher center had a policy board which met twice yearly and consisted of the coordinator, representatives from the district (teachers, principals, and district staff) and from the university (faculty and OFE personnel). The center also had an operations committee (with principal and teacher representatives) which met with the coordinator monthly and focused on operational decisions. In contrast, Hanburg County teacher centers had no regular meetings involving district and university personnel, although each had its own advisory council with school representatives which met regularly with the coordinator.

At both levels, the interorganizational arrangement began with a heavier focus on pre-service education: the coordination and supervisic of student teachers at field sites and the provision to counties of a "window on the talent." Then, with declining enrollments both at the college of education level and the local school level, focus was turning toward broad in-service education in the teacher center including the supply on-site of credit graduate courses, consultants, materials, professional memberships and workshops.

3.2. Eastern Private University Site. This study concerned a 40-year-old arrangement between a private university and an annually varying set of between ten and forty affluent suburban school districts within a 25-mile radius. The present configuration is actually about four years old, inheriting from the past (a) a core of about seven loyal district superintendents who value the connection, (b) a general obligation by the university to retain at least the image of providing service, and (c) a modest endownment fund which allows for maintenance of a small, part-time core staff.

Under the energetic and creative leadership of a newly appointed coordinator who held tenured professor rank, membership dramatically increased in 1977. The increase was due to a vigorous recruiting program by the coordinator and two graduate assistants; they promised and subsequently delivered on an impressive array of new workshop and conference offerings as well as some hands-on consulting help provided by graduate students who were paid a small stipend to serve as "fellows" to a particular district or school. Fellows also served as logistic and general support staff for the many workshops and conferences organized for teachers, staff developers, curriculum personnel, principals, and superintendents. Separate workshop series were designed to appeal to the concerns and interests of each group, but a chief concern of the coordinator and her fellows was the reorientation of the historic arrangement in order to do a better job of serving the lower ranks of the school district hierarchy.

A major espoused goal of the regenerated arrangement was to improve "networking" within the region. Thus efforts were made to encourage continuing teacher-to-teacher, and principal-to-principal exchanges to parallel the already established peer network among superintendents.

3.3 Midwestern State University Site. The Midwestern Teacher Center project operated in a large, relatively sparsely populated state. In 1976, a college dean at North Central University and his associates generated the concept of a federation of teacher centers spanning the state and loosely linked through a coordinating body comprising delegated teachers, administrators and college staff which would jointly manage each of the local teacher centers. The idea was to build a "statewide network" of professional development centers for teachers, with a home base at North Central University, one of the two major state institutions of higher education. The project subsequently received funding from a private foundation and opened with four teacher centers in 1977-78. By 1980, nine such centers were operation in the state.

Two of these centers were studied intensively. The Three Rivers Teacher Center was connected to North Central University and to the surrounding school districts, whose teachers and administrators originally were somewhat skeptical of the project.. After two rocky years, the center achieved a modicum of staff stability and put together a diverse and well-attended program. The center emphasized lateral exchanges of information and assistance between teachers, with a correspondingly lower profile for project or workshop leaders drawn from the university. As a result, collaboration between the university and local schools was sporadic, although the center gradually became the conduit for in-service offerings, the dissemination of new practices and products, and some modest research. While support from area teachers grew, district administrators did not see the teacher center as a priority and hesitated to commit local funds, thereby compromising the transition of the enterprise to stable funding and leadership.

The Arcadia Teacher Center pre-dated the creation of the state-wide network by some four years. It grew from the teaching of an assistant professor at Arcadia State College to pre-service elementary teachers-in-training. In an attempt to simulate an enriched classroom environment, the instructor gradually accumulated a vast repository of materials. This resource bank was gradually used by in-service teachers enrolled in one of several special programs administered by Arcadia State. Upon joining the state-wide network, the Arcadia Teacher Center extended its in-service format and enlarged its already voluminous resource center. The staff also adopted a more self-conscious role as process helpers and resource finders for teachers trying to change their instructional practices. Gradually, other faculty members were integrated into the teacher center, thereby multiplying contacts with area teachers and across departmental lines at Arcadia State.

4. Cross-site Comparison on Major Descriptive Characteristics

Cross-site comparisons were made on a great number of characteristics. Of these six stand out as having special importance and interest: (1) the structural properties, per se; (2) degree of formalization; (3) scale of enterprise and site; (4) the activity mix; (5) the knowledge transferred; and (5) the number and variety of innovative transfer modes employed.

4.1 Structures. No one structure proved obviously superior to any other. The very loose structure of the Eastern Private arrangement which allowed easy entry and exit from membership for any school district and in which there were no "centers" or administrative roles within districts tied to the arrangement proved extremely hardy over a 40 year period. However, it may have resulted in less serious commitment and concentrated efforts at school district improvements, especially in later years. Having a central office on campus appeared to be very important in gaining access to talented faculty and in providing logistical support at all sites. Having decentralized teacher centers strongly coupled to a central office seemed especially desirable at Eastern State. The lack of such a center structure at Eastern Private undoubtedly diluted its impact. The dangers of a decentralized structure with district-based teacher centers is that the centers will become "orphaned", never fully accepted by the district administration and assigned inferior space and resources. This happened for at least the first two years at the Three Rivers site associated with North Central University. At the very successful Arcadia site the teacher center was located on the college campus and through the efforts of the coordinator became a central locus of teacher training activity for the college. Thus, structure, per se, seems much less important than how structural features are implemented and how behavioral patterns of linkage are allowed and encouraged to develop within those structures.

4.2 Formalization. All arrangements studied has some level of formalization. Memberships involved written agreements mutually signed but the elaborateness of these agreements and the amount of specification contained in them varied tremendously, being highest at the Cardon County site of Eastern State and probably lowest at Arcadia. The degree of formalization appears to make little difference in the effectiveness or outcomes of the arrangements studied. However, it may make a great deal of difference in replicating IOA models from one site to another. Cardon was a new site within an old and established arrangement structure at Eastern State. Historic ties to the site from the university were weak. Thus the availability of a formula for connecting and sharing resources may have been crucial to the emergence and survival of this center.

4.3 Scale. The sites covered in this study varied greatly from one another in terms of geography and numbers served. It seems notable that the most dramatically and convincingly successful arrangement developed at the site which was most rural and least populated, Arcadia. Of all the sites it was also the most isolated from various types of educational resource providers other than the college itself. It was a small community in which almost everyone knew everyone else and in which local pride was a salient issue. These were all aspects which might discourage innovativeness, but which tend to enhance innovativeness and program success, once a program has gained some acceptance. At larger sites there is likely to be more going on altogether, more competing resources, more conflicting purposes, and less saliency to the IOA enterprise.

4.4 The Activity Mix. The predominant activity at all sites was the training of teachers through workshops, courses, and supervised experiences. At Midwest and Eastern State there was always provision for formal credits for such involvement and these credits formed a crucial part of the "bargain" between the university and the schools which the arrangement represented. The lack of such credit arrangements at Eastern Private probably served to weaken ties and lower over-all participation. On the other hand, there was more stress at Eastern Private on on-site consultation and on working with levels other than teachers. Arrangements at all sites were reported to be aimed at a diversity of objectives and this diversity probably insured that more persons on both the university and the school sides would perceive involvement as providing benefits to themselves personally.

4.5 The Transfer of Knowledge. This study was undertaken in part because of what was seen as the unique role of the university in society as the prime generator and disseminator of knowledge. These arrangements were examined for their potential as mediators of knowledge transfer both from the university to educational practitioners and from practitioners to the university. What we found was a great deal of transfer of knowledge from specific faculty members, usually a very limited sample of the entire faculty; and we found very little reverse flow, i.e. from practitioners to university faculty although there were some exceptions, especially at the very intimate Arcadia site.

Arrangements did not work very well as transmitters or linkers to expert knowledge sources outside the local area or to knowledge which was explicitly validated and/or research based. The notable exception was the original Council arrangement at Eastern Private which involved the systematic collection of large quantities of data on innovative practices within member schools and the subsequent tabulation, analysis, and sharing of such data among members. The same data pool led to over 100 doctoral dissertations over a 30 year period and the publication of many hundreds of journal articles, books, and monographs. Such research productivity and sharing is notably absent among contemporary arrangements.

4.6 Innovative Transfer Modes. Although traditional transfer modes such as workshops and academic courses were common at all sites and the dominant feature of some, all sites also made some effort to be more innovative in their approach. Six modes are most noteworthy.
(1) teacher-to-teacher exchanges: both Eastern Private and Midwest had a strong underlying belief in the importance of "craft knowledge", i.e. knowledge emerging out of the experiences of teachers in the classroom. Nevertheless, teacher-to-teacher exchanges were observed to be only a minor feature of the program at Eastern Private and were not rated as the most appreciated by participant. At Midwest the two subsites were dramatically different: at Three Rivers there was a great effort to use teachers as primary knowledge sources and communicators but here, too, there was no great appreciation from other teachers, some of whom resented the distinction implied between themselves as participants and these others as "experts"; at Arcadia there was a good deal of lip service to craft wisdom but actual activities almost always involved college staff as coordinators or presenters of material. Informal teacher-to-teacher contact abounded at Arcadia, however.
(2) materials development: There was some amount of this at Eastern Private during the development of the Writing Consortium and individual center coordinators in the Eastern State arrangement would sometimes engage in this activity, but Arcadia was by far the most active site in encouraging teacher inventiveness through adaptation and development of materials in collaboration with or under the guidance of college faculty.
(3) self-guided instruction and materials use: primarily practiced at and emphasized at Arcadia and greatly facilitated by the rich and varied materials library at that site.
(4) observation and modeling: important at all sites where there was an involvement of student teachers, i.e. Arcadia College where teachers could comfortably observe students working with small groups of their own pupils, and Eastern State where an original and continuing purpose of arrangements was the placement and supervision of student teachers.
(5) individual problem-solving: notable effort were made at Hanburg and Arcadia sites to encourage problem-solving by teachers; it appeared at Arcadia that such ventures were more successful after teachers had become comfortable of the setting and trusting of resource persons through more formal courses and workshops.
(6) group and system-level problem-solving: not observed at either Midwest site, sporadicly at the Cardon County site at Eastern State, it was a prominent feature of efforts at Eastern Private, first in the early days of the Council when superintendents considered how they could bring innovation into various aspects of schooling, in the revival period through the involvement of principals and other administrators and through assignment of "Fellows" as on-site consultants to schools. Reported success from these more recent efforts is modest and the "Fellows" program has been reconfigured away from such on-site

problem-solving assistance.

5. The Array of Outcomes.

All of the arrangements studied were judged to be successful on a number of criteria. Outcomes were measured in five areas: increases in power or status; new or strengthened linkages within or among participating organizations; knowledge transfer ; practice improvements; and enhancement of capacities of participating organizations. Although achievements in these five areas do not lend themselves well to summarization, here are a few highlights.
(1) power and status: generally, association of school personnel with the university through the arrangement served to enhance their status as individuals, sometimes through formal recognition as "Adjunct professors" (at Eastern State), through rubbing shoulders with the "greats" (Eastern Private), and through working toward advanced professional degrees (mostly Eastern State and Midwest but a small element also at Eastern Private where some persons made contacts leading to enrollment as graduate students).
(2) linkages: old linkages were strengthened and many new ones made between the university and the school districts at all levels at all sites. The content of almost all these linkages was directed in one way or another toward the improvement of schooling and university teaching. Strengthened linkages also led to all other forms of positive outcomes. Inter-organizational linkages were also associated with intra-organizational linkages at Eastern Private University and especially at Arcadia College. School-school linkages were increased and strengthened at all sites.
(3) knowledge transferred: the most obvious and quantiatively impressive outcome at all sites was the amount of knowledge transferred through these arrangements. Knowledge content was extremely diverse, including reading, writing, mathematics, science, social studies, ecological studies, and so forth. All sites studied and all centers within sites were able to provide this range. Only Eastern Private provided knowledge related to such diverse aspects of schooling as legal matters, finance, sexual equality, evaluation, and items that would be of special interest to administrators.
(4) practice improvements: though generally not studied or measured directly these were widely reported to be effects of participation in arrangements. They were especially obvious and extensive at the Arcadia site but some specific instances were reported at all sites.
(5) enhanced capacity: these were most prominent at Arcadia where teachers spoke frequently of "rejuvenation" and "revitalization". The materials center at Arcadia also generally increased capacities for surrounding school districts which had no resources to replicate such a service. All school sites gained a capacity to reach out to a more diverse and more remote resource universe through linkages established with the universities, and the universities increased their capacity to provide in-service training, increasingly a source of financial support at the two state sites.

6. Institutionalization as an Outcome

In assessing outcomes at each site serious note was also taken of the apparent durability of changes made and of the extent to which the arrangement, itself, had become an institution or a solid and continuing part of another institution within the arrangement. Degree of "institutionalization" was rated on 23 seperate variables for each site and sub-site. These measures included "used on a regular or daily basis","provides continuing benefits to school administrators" (and other key stake-holders),"outperforms or eliminates competing services", "achieves stable funding", "survives annual budget cycles", "has achieved formal certification for activities", "has routinized maintenance and supply functions", and "has survived the departure of key original staff members." Generally the Eastern State-wide arrangement with its seperate center arrangements within counties seemed to have the strongest chances of survival. The Arcadia center at Midwest also looked strong but neither the state-wide effort nor the Three Rivers center looked very robust on many dimensions. The Eastern Private arrangement seemed to stand a good chance of continuing on the strength of a 40 year history and some solid recent achievements, but it exists in a turbulent environment with many competing interests on both the university and school sides. Much seems to depend on continuation of the present leadership.

7. The Major Effects and Their Causes

For analytic purposes it is useful to divide the sequence of events involved in the evolution of an interorganizational arrangement into two phases. The first is the period from the historical antecedents to the full operational realization, what might be referred to as the "development". The second phase concerns what happens as a result of that first operationalization which may or may not lead ultimately to long term survival and prosperity.

7.1 The Causes of Development. We measured full development as a function of three variables: variety of activities; extent of use; and number of long term collaborations. Each case writer developed a chart of variables that led up to these effects in terms of a time series and in terms of apparent causes. The most direct antecedent in all three studies was "diversity of objectives" which in turn was a function of perceived benefits by school personnel and the responsiveness of the staff of the arrangement to the needs and concerns of school personnel, especially teachers. Further tracing of antecedents suggested that causes grouped into two clusters:one which we termed "stabilizing forces" and the other "catalytic forces" or change-producing forces. Stabilizing forces included predisposing conditions such as a history of prior linkages between the university and these school districts, the orientation of the university toward service, and the orientation of the schools toward seeking outside assistance. Catalytic forces included the level of need or concern for changing the current situation, the emergence of new dynamic leadership, the introduction of a new idea or conception of what an arrangement might be and might accomplish, and at least the temporary availability of new financial resources. The convergence of stabilizing and catalytic forces at a particular moment leads to the striking of a bargain or multiple bargains (hence multiple objectives) between the university and the school districts, and from this bargain and the energy provided by the leader the arrangement is brought to life.

7.2 The Causes of Continuation. Participation in the arrangement and utilization by participants of the resulting knowledge and experiences leads inevitably to a first level of"outcomes" in the form of experienced rewards and benefits by both sides and increased and strengthened school-university ties. These, in turn, should lead to agreements on both sides to continue the arrangement into a second school year, but the extension will also depend on a continuing sense that a real need is being served.

Even with the experience of reasonably positive outcomes in these terms, however, long term strength of an arrangement will be affected by the presence of other organizations, activities, and resource facilities in the school environment that may compete with those provided through the arrangement.

Finally, long term continuance of the arrangement as an operational entity (institutionalization) builds on four elements: (1) sustained support from the district which is manifested in attitudes, behavior, and dollars; (2) a like kind of support from the university; (3) a continuing and varied program of activities in which both school and university personnel are mutually engaged; and (4) a continuity of strong leadership, preferably demonstrated through the transition from the initiating (catalytic) leader to succeeding (stabilizing) leaders who still have the energy and clout necessary to deal with faltering university and school support while they involve themselves in issues of system maintenance.

8. Implications

In the final chapter of the study implications are drawn first generally and then as they apply specifically to different interest groups.

8.1 General Implications. Ten general implications are drawn from this study as follows.

(1) School-university collaborative arrangements can be developed which have a rich program of offerings and can be maintained over long periods of time.

(2) Wide and substantial benefits can and usually are derived from such arrangements, especially for participating teachers, schools, and school districts, but also for universities and their education faculties.

(3) The costs of such enterprises are relatively modest in proportion to benefits accrued to those concerned and to society as a whole.

(4) They must be built on a perception of mutual advantage (a "bargain") arrived at between university and school personnel.

(5) Development of these arrangements in the first place seems to require the emergence of an energetic and inspirational leader who has clout within the university system.

(6) Development also requires the articulation (usually by the leader) of a conception of what the arrangement could be and could accomplish.

(7) Arrangements seem to require a past history of successful linkage between representatives of the university and the schools.

(8) Arrangements do not appear to depend on a high degree of pre-planning and structuring of activities, especially if the above condition is fully met.

(9) More complex and system-wide changes and solutions to problems probably have to build on prior activities of a simpler nature such as knowledge transfer through coursework and workshops.

(10) School collaboratives which involve universities as central members offer unique advantages over those which do not.

8.2 Implications for Funding Agencies and Federal Policy.

(1) All such arrangements have special start-up costs and continuing costs, and up to a point the level of outcomes will be proportional to the investment, other things being equal.

(2) Long term support issues must be addressed in some way directly by those who provide short-term and start-up funding, i.e. there should be a realistic prospect that long term funding can be arranged.

(3) Organizations such as universities will be reluctant to invest heavily in activities in which they see themselves primarily as service providers unless there is compensation for that service.

(4) Charismatic leaders can sustain an arrangement through development but may, themselves, under-rate long term resource needs.

(5) Federal funding can play a significant role in initiating arrangements of the type studied if the leadership is there and the stabilizing conditions are present. Research revealed that such funding had been a significant factor in the early history or pre-history of each of the arrangements studied.

(6) Documentation of arrangements of this type is desirable and probably will rarely be done without federal or other third party assistance.

(7) Arrangements of the type studied could be connected to other federal dissemination efforts such as the National Diffusion Network to mutual advantage.

8.3 Implications for State Policy. The state is a logical locus for long term maintenance of university-school collaboratives, and such a state policy would provide an equivalent structure in the education sector for what now exists and prospers for wide social benefit in the agricultural sector. Support of such collaboratives is probably much more cost-effective than the establishment of a free-standing network of educational service centers within a state (such as currently exists in Colorado, New Jersey, New York, and Texas, for example). For states where such networks already exist linkage to school-university collaboratives would also work to mutual advantage and toward enhancement of the state-wide education system.

8.4 Implications for Universities. Universities contemplating the development or continued support of such arrangements should consider: the quality of leadership available to the task and the status of that leadership within the faculty; the range of benefits which the university might derive from the arrangement; how these benefits might be designed for or enhanced; how activities can be extended beyond traditional modes of knowledge giving; and how research and evaluation activities can be melded with service activities for mutual benefit.

8.5 Implications for School Districts. Districts should look beyond in-service training needs and traditional knowledge receiving toward the potential of collaboration for problem-solving, curriculum and instructional change and other desirable changes in the process of schooling. They should also look to the involvement of personnel other than teachers and they should allow teachers and others to become involved in collaborative activities in a more prolonged and intense way. Finally, if they find that the rewards of collaboration

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are clear and positive, they should be prepared to back up their support with long term financial commitments.

8.6 *Implications for Direct Actors*. Those who contemplate getting involved directly in the development of such arrangements should be aware of the inevitable strains of forming a new enterprise which stands between established institutions. There is first a problem of overload, of promising and then doing too much. Then there is the problem of marginality,i.e. of being perceived and treated by each organization as if you belonged to the other or to neither. Then there is the question of examining realistically your own resources, clout, charisma, and energy reserves. Finally, it is important to consider what the bargains will consist of, what will be in it for each of the parties involved including yourself.

8.7 *Implications for Development and Research*. It is proposed that , in addition to more studies of this kind, there might be a need for practical tools to facilitate the work of university-school collaboratives. Three suggested items are a handbook for coordinators, some formative evaluation procedures and instruments, and a resource consultant file so that novices in this game can reach veterans for sage advice.

It is also recommended that case study methodology for future projects of this type be simplified with some attention to the development of credible but quantifiable outcome measures to enhance comparability. This study leaves open the question of how and whether arrangements such as these can be developed where there is no prior history of school-university linkages and where appropriate leadership does not naturally appear. Finally, it is suggested that the findings of this study could be put to work in experimental efforts to enhance the performance of existing arrangements including those studied.

PART ONE: SCHOOL-UNIVERSITY COLLABORATIVES: WHAT ARE THEY AND WHY ARE THEY IMPORTANT?

Although it is not a particularly well studied or documented fact, the social fabric which binds our society becomes increasingly complicated by the year. In education, in particular, this has been the case, especially since the 1960s and the beginnings of large federal involvements in public education at all levels. Sometimes the increase in complexity is applauded as progress, more often in recent times it has been deplored as a burden, as a drag on initiative, and an unwanted constraint on freedom. It is not our desire here to take a stand on such issues but rather to shed some light on the nature of one process by which social arrangements become more complex, namely through inter-organizational networking.

If it is difficult to understand all the structures and inter-connections that make up our social world, it is at least equally difficult to describe them in a coherent way and more difficult yet to quantify that understanding in anything like a scientific way. Nevertheless, we started out in this project with that kind of ambition. It might have been a bit simpler and more realistic to have done a study only of what happens within a complex organization like a school or an even more complex organization like a school district or a university. Certainly the last word on such organizational analyses has yet to be written. But we chose instead to go in between existing organizations to examine phenomena which leave much fainter traces, which exist on the periphery of consciousness for most of the mainstream actors of organizational life. What especially intrigues us is the possibility that in this inter-organizational space we will find the seeds of altogether new organizational forms and forms which have very special properties and functions in bringing all the more solid organizational forms together in a more systemicly interdependent and functional whole.

There are probably as many varieties of interorganizational arrangement as there are organizations so that in beginning a study of this type, we have the further problem of selection. Here we are guided by two masters. The first is the prejudice of our own past research, almost all of which has been directed toward finding the connections between the world of research and the world of practice. This past research has led us to consider the university as one of the key organizational nodes of society, particularly when society is viewed as a knowledge building and consuming system. The second guide has, of course, been our sponsor, the National Institute of Education, which has had a long standing interest in processes by which education in general and public elementary and secondary education in particular can be improved through the better utilization of knowledge, especially knowledge derived from or compatible with scientific research. At one time universities were considered to be the almost exclusive custodians of the scientific enterprise, and while this is decreasingly the case, it is still largely true. For that reason it seemed reasonable to look at the relations between universities and schools as a prime locale for commerce in knowledge which might affect schooling in some positive ways.

Having settled on university-school networks as the focus of study and having determined that three such networks were the most that could be practically studied with our staff resources and the financial resources of our sponsor, we then proceeded to select sites in the most unsystematic but logical manner. We used our own informal contact networks and our own powers of recall which led first to a memory of a great school network formed many years ago under the leadership of a famous eastern private college of education. A contact with a present faculty member of that college established the fact that the very same network still existed and, in fact, had been recently reinvigorated. Another personal contact recalled that there was a lot going on under the direction of a very proactive and innovative dean at a state university way out in the prairies. A few more phone calls established the fact that there had been a lot going on. Finally, in an attempt to find some kind of balance between a very old and sophisticated Eastern Private college of education and a public institution servicing a mostly rural western state we made a visit to a nearby state university which had a large college of education serving the needs of a rather densely and diversely populated Atlantic state. Again we hit pay dirt, finding a very active outreach and networking effort which dated back some 14 years. We had our three networks.

Hardly a random or representative sample, they nevertheless represented a number of interesting contrasts and similarities, enough to make for a rather rich brew of speculative insight. First of all, they were all truly networks with some sort of formally legitimated status. Second they were all reasonably long-lasting: 40 years, 14 years, 4 years. Thirdly, they all appeared to exist without the help of the federal government, federal grants or supports. Further, they all held the teacher as the prime focus of concern whether this meant teacher ownership, teacher training or retraining, teacher self-help, or teacher utilization of knoweldge. These were all important commonalities, especially we thought from a policy perspective. First, there was no point in studying short-lived phenemona; longevity seemed to be a minimum criterion for viability. Second, the formal aspect was suggestive of the possibility that such networks could be deliberately designed and planned and established, that they were more than the happenstance of a certain set of individuals who knew each other. Third, and perhaps most important in a period of drasticly curtailed federal support for education, was the fact that these arrangements appeared to be financially free standing at least as far as federal dollars were concenred.

These three common aspects highlight the study from a policy aspect. They evoke such questions as:

1. What formal structures and arrangements are optimal for optimal knowledge utilization and optimal improvement of educational practice?

2. To what extent can such arrangements be deliberately planned and executed where they do not now exist?

3. What does it take to make such arrangements last from year to year and to remain vital over a period of time?

4. What useful role, if any, can be played by third party funding agencies and technical advice givers either to strengthen existing networks or to create new ones?

The differences among the three were also provocative. Are there special advantages in networking that derive from being a public vs. a private college? We generally concluded that it cut both ways but that the public institutions had a big edge when it came to teacher involvement. Are there differences between small and large institutions on either the giving and receiving ends? We found the most powerful effects involved a very small community college and a small town-rural school constituency (see Arcadia, below). What are the effects of the availability of alternative resource systems? We generally found that these arrangements prospered more where there were fewer alternatives and where services provided could be perceived as both valued and unique.

This chapter begins with a consideration of the role of the university in social problem-solving and then goes on to an extended narrative summary of each case study. We will then reflect upon such networks as social phenemona as a prelude to a more detailed consideration and evaluation. Finally, in the fourth segment of the chapter we provide an outline of the study as a whole.

1.1 THE PLACE OF THE UNIVERSITY IN SOCIETY*

The university is an institution which has existed for roughly 1,000 years. It is first and foremost an institution for educating people, in fact providing the highest levels of formal education which a society can offer. By long tradition universities as social structures are looser and less hierarchical than most other types of organizations. Even though they have formal hierarchies much like businesses, schools, and governments, considerable power resides in the direct workers, i.e., the professors who do the teaching. There has also been a long tradition in free societies of an isolation of universities from other social organizations and of a degree of independence from social regulation and intrusion from other institutions including governments, even when governments, through their taxing powers, provide the bulk of financial support for universities.

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*Some of the material in this section is adapted from the previous report by Havelock et al. Planning for Innovation (1969) See Chapter 3 "The Macro System of Knowledge Flow."

In spite of long traditions of independence and isolation, however, universities have always had a tremendous impact on the society as a whole, partly through providing advanced education for the leaders and professional specialists upon whom the society depends for survival. Starting in the mid 19th century in the United States that influence became even greater through the designation of public universities as the seed beds of new knowledge and technical assistance to the farm population within each state. Today, the Cooperative Extension Service represents one of the most elaborate and successful interinstitutional networks ever created, providing a continuous and plentious supply of knowledge and technical expertise to farms and rural homes throughout the land. In spite of its success, however, the CES model has never been emulated in any fields other than agriculture and home economics. There are probably many reasons for this, but among them is the fact that there has never been a national will expressed clearly through the Congress or the executive branch to proceed in this direction in any other field. Nevertheless, there have been other connections between universities and various service areas of the society in medicine, law, business, government, and education. Generally these arrangements have grown in an ad hoc manner, depending heavily on the initiatives of particular individuals at particular times. For this reason they are tremendously varied with respect to structure, scope, purpose, longevity, and outcomes.

Such variability, itself, provides an opportunity to the researcher and the policy planner to sort out what models of collaboration between universities and other social entities are most viable, most beneficial, least costly, and most positive in range of consequences. In large part, that is what this study is all about. It is a study of how three universities reached out to school districts and schools in their respective regions, and of how an institutional structure was created through which meaningful collaboration could take place on a regular basis.

The potential of the university as a partner in social problem solving at every level has often been noted. For example, Commager (1966) proposes that the university

> Is, next to government itself, the chief servant of society, the chief instrument of social change. It occupies something of a symbolic role of both the church and the state in the Old World, but it fills a role which neither church nor state can effectively fill; it is the source, the inspiration, the powerhouse, and the clearinghouse of new ideas.

If we can accept these grand statements of the university's potential role as more or less valid, we need also to recognize that the problem-solving mission of the university center is only partially realized and actualized by the university, itself. A bastion for new ideas, it is also a prison for new ideas, surrounded by high walls which the academics have built for themselves, the norms and values which maintain the purity of "basic" science and the complete independence of the basic scientist.* Stated another way, the university is very ambivalent about its role as universal expert and problem solver for the practical world. Traditionally and particularly in England and Germany where the university came into being, applied work and "service" have been shunned altogether. In the more practically minded United States, however, the concept of a university as a center for teaching, research, and application came into being with the land grant college legislation beginning in the 1860's. A century later, however, the image of the U.S. university is not clear even to itself (e.g., see Parsons, 1968). A struggle goes on between teaching and research interests which virtually crowds out serious consideration of the university's role as the problem-solver and expert for the greater society. Meanwhile, the average citizen looking on from the sidelines insistently asks when the professors are going to stop "studying" problems and start "helping" the society by using what they know.

*Znaniecki notes the positive value to society as a whole in the maintenance of the Ivory tower and the scholar as the guardian of truth. (1940)

The internal dissension, the blurred image, the the confusion about priorities in the modern university are all related, in part, to the one outstanding fact about the university as an institution: the independence and dominance of the tenured faculty. The university has an "administration" which is a form of government, to be sure, but it is generally recognized that most substantive policy matters within the university, e.g., the curriculum, the methods of instruction, recruitment of students and faculty, and the content and nature of research and service, are determined by individual faculty members, governed loosely by the supposedly shared norms of scholarship, science, and academic professionalism.

If these norms were throroughly explicit and universally enforced, there would probably be very little attention devoted to knowledge application and utilization by universities. In fact, however, there is only vague consensus and some reluctance to enforce such norms with the result that the university has expanded and diversified its activities enormously. U.S. universities today, even the most prestigious, are hardly recognizable from the 19th century English and German ancestors, including as they do such diverse components as business, nursing, and social work schools, bureaus and institutes of research and service, colleges of continuing education, and departments of communication, packaging, hotel management, home economics, and on and on.

Even with this great diversity and evident concern for training and research in the practical arts, there remains a kind of implicit hierarchy within the university. New components, particularly those with an applied emphasis, are accepted only reluctantly and viewed suspiciously by the older, more academic, more "central" departments. Nevertheless, the university changes in spite of itself, first because it has no strong central government to enforce the traditional conception of its mission, and second because outside pressures force these changes upon it. As Commager points out (1965 p. 78), most of the outside pressure has come from the federal government and mostly from government efforts to mobilize society to fight wars.

In this fulminating growth, mostly unplanned and uncoordinated, some authors are able to detect a meaningful pattern which bodes well both for the university and the society. Clark Kerr (1964) describes the new university as a "multiversity," the core of expertise and problem solving power for the whole society. Benne tells us how the newer peripheral elements form a bridge between academic scholarship and the rest of society:

> The periphery of the university has its distinctive virtues too. Typically it is closer to the interests, concerns and maintenance and growth requirements of other parts of the society than the center is. Members of the periphery cannot dispense with the category of human and social importance in their work; indeed they must define and redefine this category in their responses to the urgencies and emergencies of the part of society they serve, in making their judgments about teaching and about applied research. In a real sense they must bring the wider society to the university--they must mediate between the wider society and the center of the university. (Benne in Benne et al. 1966)

In summary, the potential role of the university as the principle societal resource for expert knowledge is clear. Both central and peripheral (basic and applied) sectors of the university community play a critical role in the maintenance of culture and the generation of new ideas. However, with the exception of agricultural disciplines, the coherent and effective utilization of the university as a resource system has yet to be realized.

The key bridging institution between academia and the worlds of practice is the University-based professional school. The professional school serves as a bridge in several ways: (1) it provides for profession renewal through continuous recruitment, training and certification of new members; (2) it provides a home base for specialists and for applied researchers; (3) it furnishes much of the new knowledge content for professional journals; and (4) it is likely to provide a large proportion of the formal and informal leadership to the profession.

The ideal role of the university professional school is well-described by Barber:

> The university professional school has as one of its basic functions the transmission to its students of the generalized and systematic knowledge that is the basis of professional performance. Not only the substantive knowledge itself, but knowledge of how to keep up with continuing advances in professional knowledge is what the university school seeks to give its students. Where the body of professional knowledge is changing very rapidly, the university professional school may take a direct role in promoting the 'adult' education of the members of its profession through postprofessional training courses, seminars and institutes.
>
> Equally important is the university professional school's responsibility for the creation of new and better knowledge on which professional practice can be based. Its university position makes it possible for all members of its staff to be part-time scholars and researchers and for some to carry on these activities full time. The university professional school can borrow resources of knowledge from other university departments, either by co-opting full-time teaching and research personnel or through more informal, part-time cooperation in the university community. The better the university professional school, the more likely it is to use resources from the other professional schools in the university and from all the other departments of basic knowledge insofar as they are relevant. In sum, the university professional schools are the leading, though not the sole, innovators and systematizers of ideas for their professions. (1963, pp. 674-675)

In practice, however, the professional school is not a wholly creative force. Many of its members have an exclusively academic career orientation and are so insulated from the service function of the profession that they have no current conception of consumer needs and problems and no interest or concern for meeting them. At the same time the professional school is marginal to the university, partially shut off from the main stream of new scientific thought emanating from the academic departments. The weakness of the professional school as a linking mechanism is most glaringly apparent in the shabby and poorly financed efforts to provide university-based continuing education for the members of the profession.

Most professions are also ambivalent about the efforts of professional schools to "upgrade" service standards because such efforts run counter to the personal self-interest of the existing membership. Members of professional schools who wish to bring about change in the profession must work slowly and gingerly, primarily using persuasion and informal pressure as their only tactics.

These thoughts on the role of the university and more particularly the professional school form an important backdrop to the narratives which follow. Each represents an outreach effort initiated by certain members of the professional school faculty and/or by deans. They are seen in the process of trying to realize the potential described by Benne, Commager, Kerr, and others. The context is not ivory tower but both the norms and the public images of academia hang over each of these scenes in varying degrees.

1.2 FOUR SUMMARY CASES OF SCHOOL-UNIVERSITY COLLABORATIVES

Perhaps the best way to begin this analysis is to present a summary narrative of each case, condensed from the mucn longer presentations which fill the pages of the first three volumes of this series. For each case we will give an overview of history, present structure, functions, and outcomes including an assessment of the degree that the arrangement seems to have achieved permanent status as an institution. We will also divide the Eastern Private case into two separate cases because two separate eras are covered and two rather different patterns of arrangement and outcome are applicable.

1.2.1. Case Summary Number One: The Council--The First Great Collaborative

Of all the schemes that have been developed over the years to bring schools together around the core of a college of education, none has been more successful or long lasting than "The Council." The Council stands as a kind of exemplar for networking in education. In its early years it had great importance as a model for conducting large scale, sustained, and rigorous research on schools and schooling, but it was equally successful in involving many thousands of school and university people in the dissemination and practical utilization of such research knowledge for school improvement. That is why this volume begins with this story. It sets a standard and a vision of what is possible and from many points of view desirable. Of course, it is not the only model and it may not be a pattern which is either attainable or ultimately relevant to the 1980's. Certainly there are others which we will discuss later which do some things which the Council did not do in its heyday. Nevertheless, in a period which predates federal initiatves in educational R&D and practice improvement by a generation, one can only be awestruck by the power of the original Council model.

The Key Person. One will be struck throughout this volume by the role played by a few key persons, usually only one or two per network, who overshadow all other actors in their energy, intelligence, their sensitivity, and the power of their vision.

Leading this parade of superstars is the founder of the Council. It is clear that by 1940 the founder had already achieved considerable stature not only as a researcher who emphasized quantitative approaches in large-scale studies but as a major advisor to educational leaders at federal, state, and local levels. We learned from interviews that he was in addition a person with considerable social skills who developed strong friendships which operated on informal (e.g. fishing trips) as well as formal and work-related bases. He was also eagerly sought by graduate students as a mentor with whom one could learn a great deal about research and school systems, with whom one would be likely to find a clear road to dissertations and to future job placements.

From the reflections of a number of informants we got a picture of the founder as a charismatic figure, referred to in one publication as "the renaissance man of educational administration." He also appeared to some to be "an irascible old bastard" with an image to outsiders of aloofness and formality. However, he excelled in relating to superintendents, frequently going out to rural areas to sincerely congratulate school administrators for all the good things they were doing. He also had a reputation of being very good to his own students and very kind to the people who worked for him. Being invited to work with him was described by one informant as "kind of like getting a National Merit Scholarship; once you had it you were considered to be made." The informant could not recall any student or staff person being dropped once they were hired. He also made sure that his students got to the annual meetings of the American Association of School Administrators at Atlantic City, and he saw to it that they got visibility and social introductions to important school administrators at these meetings.

It is important to note that the founder was a dedicated researcher who thought that the road to reform was through research. Thus he jealously guarded the researdh funds that were garnered through various networking activities and he saw the research function as being central, supported in various ways by program elements such as conferences. He was also a person driven by what could be called an elitist theory of reform, a theory largely of his own making (although parallel notions had been developed in cultural anthropology earlier and in rural sociology about the same time). Thus he was delighted when comparative studies showed his local network as a group to be far ahead of most school districts across the country on all his dimensions.

The historic institutional context. A key to the understanding of this case is the fact that it involves a set of school districts and a college of education located in one of the most affluent "old money" areas of the United States. The school districts which later became the pool from which members of the arrangements were drawn had a reputation for being among the strongest in public education, in many cases vying with and passing many private schools in college placements. It was also from these schools that the university drew its original teachers to become professors at the college of education (which was primarily a graduate school of education). Thus it was originally conceived as a special institution at which teachers could learn to improve their craft through the tutelage of other teachers who had demonstrated mastery. By the 1930s, however, the reputation of the college as a center of research and scholarship was also firmly established and undoubtedly overshadowed the "teacher's college" image. Therefore one might surmise that even in 1940 the idea of providing direct service to a local area was no longer a distinct priority of the college.

Founding and Start-Up. One immediate stimulus for the founding of the arrangement was a national conference for school superintendents convened in the summer of 1941. As a result of the success of the conference a number of superintendents, mostly from the immediate area of the college of education, got together with the founder and decided that it must be kept up on a regular basis. There was no formal structure at that time, no constitution or by-laws, but a general agreement among the districts to share and learn from each other, particularly concerning new practices. The college's capacity to conduct practice-relevant research and to share the results of that research and the work of other distinguished faculty members were additional important attractions. A third aspect was the "lighthouse" concept, the idea that these affluent schools could develop innovations with their greater capacity and that they could then be disseminated to less affluent districts, thereby accelerating educational progress.

The founder hired a former graduate assistant who had worked on the "adaptability" measures to supervise a procedure for collecting material from each member district regarding advanced practices. A number of graduate students teamed up with school district volunteers to collect, observe, and record this material. It is noteworthy that from the earliest stages of this process there was an informal rule that no volunteers would conduct observations in their own districts, a feature which not only increased objectivity but also led to heightened interchange of experience and information among member distircts at all levels.

Contributions of the districts to the consortium arrangement which became known as "The Council" were originally based on a very small per-pupil fee which was greatly supplemented by the contributed staff time of observers. The fee structure also allowed the founder to begin hiring a core staff which could prepare special publications for the membership and for a larger national audience of educators. The first major collection effort resulted in a book called What Schools Can Do, and since it was a compilation and description of 101 innovative practices it soon became known as the "101 book." The book was very popular and widely distributed throughout the country.

The activities related to the development of the "101 book" were also of some importance to member districts as the material gave them each some good "show-and-tell" for the annual dinner of the metropolitan area boards of education, a major annual event in the area. The activities of the consortium had an additional appeal to member districts in that they offered "survey" services, i.e., documentation of school district operations and finances, at a fraction of the cost that would be involved if each district had to contract separately. Apparently such "surveys" were routinely expected by school boards on a periodic basis as a kind of feedback or evidence to the community that its funds were being well spent.

Heyday. By the third year of collaboration and after considerable experience with the documentation of innovations, the founder and his team organized and formalized the innovation documentation process into an instument which they called the "Growing Edge," meaning an index of the extent to which a district was on the cutting edge of innovation. This instrument was a clear descendant of the "adaptability" measure of the late 1930s and represented the continuing efforts of the founder to develop a reliable and comprehensive measure of school district quality. By the third or fourth year the Growing Edge became the basis for a survey of services of all member districts. A special feature of its administration was that each district was assigned a numerical score on each dimension and was given its own code number; each superintendent would know only his own number and would thus be able to compare his district's results with those of others as a group. Thus a sharing and feedback mechanism was developed which preserved anonymity while at the same time providing each with the critical comparative data they needed. These sharing sessions on the Growing Edge were restricted exclusively to superintendents and no substitutes were ever allowed.

However, The Council operated on a much broader front through an elaborate arrangement of committees and subcommittees which considered specific content areas. These committees as well as the annual Council conferences allowed for representation of teachers, specialists, and administrators at all levels. In addition The Council published a monthly newsletter continuously from the fall of 1942 through the spring of 1977. Both for the newsletter and for conferences and committee work The Council was able to call upon the very distinguished senior faculty of the college.

Membership rose rather quickly to a little over 60 districts and remained more or less stable at that level for about 20 years. In addition, there were very significant spinoff institutional forms of which at least four deserve mention. The first spin-off involved the establishment of many college-school collaborative networks to collect and share research findings and innovations as the founder's concept spread rapidly across the country in the late 1940s. In some of the most successful adoptions of his idea, persons who had worked on the founder's staff were hired specifically to set up and manage the arrangements.

The second new organizational form also followed from the success of the original network. Because of its rapidly growing reputation, The Council received many requests for membership from far outside its service area. In these cases "associate" memberships were initially granted at a reduced fee but later the associates were drawn together into their own network which grew in size to nearly 250 members in the 1950s. In the founder's conceptualization of the change process as first involving invention and then diffusion, these associates played a very important role as a national diffusion network for the "101 book" and many subsequent analyses and write-ups of reform practices. They also represented a much broader sample through which the Growing Edge methodology could be validated and extended.

A third activity which resulted partly from the success of the original Council and partly from the founder's continuing efforts to assist states in formulas for financial assistance to schools was the school centralization program which involved a large number (about 275 and later 350) newly consolidated districts from the more rural parts of the large state in which the university resides. A special arrangement was developed for the university to provide statistical survey services to these districts along with the dissemination of information on innovations. In addition to providing a state dissemination vehicle (alongside the local and national networks), this network had special significance because it supplied a rather large and reliable income to the university which could be used by the founder to greatly expand his staff and increase his research capacity.

Finally, another development of the expansionary period of the late 1940s and early 1950s was the creation of a Research Institute as a new institutional framework under the leadership of the founder within the administration department of the college. The Research Institute became the primary seat of a consolidated program of research with the local, state, and national network activities as the service-outreach components organizationally subordinate to it. The growing clout of the founder within the university allowed him first to borrow funds from the college to provide for the start-up of the institute and later to provide his key lieutenants with professorships, at least one of which was tenured.

It is rather difficult to assess the impact of this heyday period in quanitative and fully credible terms so long after the fact, but there were certain obvious outcomes which are impressive. First of all, the number of school districts that were directly influenced seems to have been large and the areas of practice where some impact could have been felt were very broad. With each administration of the Growing Edge, Council members scored higher and higher until the instrument no longer discriminated among them--even though districts in other parts of the county were still far behind. Thus it seems probable that the continued feedback of the triennial survey caused superintendents of lagging districts to take specific steps to catch up in whatever areas seemed to be deficient. Perhaps more importantly, the networking activity provided an institutionalized mechanism for continuous reform of school practice across a very wide front, increasing the capacity of districts to survey their own functions, find out what other districts were doing, and obtain access to resources of every kind (including the talented and well-trained graduates of the founder's program).

On the university side there were also some clear gains. The programs which were collectively an outgrowth of the original Council were able to support a dozen or more graduate students continuously over a 20-year period in addition to three full-time staff members at faculty rank. By 1961 the founder reported that approximately 200 research studies had been carried out within the Research Institute. Many of these were also Ph.D. dissertations and all were related as pieces of what was probably the largest sustained and cumulative programmatic research effort ever undertaken in the field of education. In spite of these achievements, however, the influence of the IOA upon the college of education as a whole was only moderate. As new programs (such as a rather large "citizen education project" sponsored by the Carnegie Foundation) were taken up by the college, The Council turned out to be a fertile ground for access to schools but these connections were ad hoc in nature and did not involve the extension of influence of The Council and its processes into other college departments nor even to all other members of the administration department itself. In fact another endowed research institute existed in parallel to the founder's institute under its own charismatic leader who advocated "action research," a form of collaborative problem-solving in schools involving joint efforts of university-based researchers and practitioners. From this we have been able to discover there was virtually no interchange between these two institutes.

On the other hand, in the development and administration of the Growing Edge, the founder was able to enlist the support of faculty from several departments. In the "observer's guide" used for scoring the instrument there were twelve subject area sections called "windows" and for each window a senior professor was enlisted as expert consultant. The involvement of professors was not always very successful because traditionally "consulting" meant lecturing to an audience rather than working through an instrument to define categories. In a few cases, however, professors were inspired by the process as a new approach to both research and graduate teaching.

For The Council itself, an obvious and impressive outcome was survival and prosperity over a long period of time. Memberships remained steady and activity levels remained high for at least 20 years. An elaborated institutional structure developed at the college end with an impressive measurement capability and senior staff were given faculty appointments.

The Council continued to flourish after the founder's retirement (1960) and death (1962). In fact, under his anointed successor a new and ambitious program was undertaken to develop comprehensive "Indicators of Quality" for schools. That program had a life cycle of 10 years which is chronicled in Volume III of this series (pp. 21-35), but with the successor's retirement in 1972 The Council languished and very nearly ceased to exist in anything but name and memory. Thus, it is our view that the total Council story can really be best understood as two separate stories, one ending in 1962 or arguably in 1972 and the other beginning about 1975.

1.2.2. Case Summary Number Two: The Council Revival: Eastern Private University and Its School Network

In 1975 the Board of Directors of The Council, a group composed entirely of school district superintendents and now shrunk to the five representing the only remaining dues-paying memberships, suggested to the University that the time might be at hand to bring The Council to an end. The University responded by bringing the IOA under the wing of the endowed research institute and by appointing a new part-time director who had a strong commitment to supporting practice improvement at the school and teacher level as well as a background in planned change experimentation and networking.

The new leader breathed life into the IOA, first by bringing on staff energetic and creative graduate students who had had extensive experience as school practitioners, primarily in teaching and staff development roles. Together with two such assistants, she launched a major recruitment drive to woo back memberships, visiting many of the superintendents and providing them with a display of new offerings, including multi-session seminars for staff at various levels on a range of topics, conferences for superintendents with nationally-recognized speakers, and, as an option, the services of a"fellow,"an experienced graduate student who would come out to the district on a weekly basis as a consultant-change agent or linker. In all these offerings, emphasis was placed on the service function to school districts with no implication that districts would be used as research sites or field settings for student dissertations. In return each district was to contribute a modest fee of $750, actually halved from the previously established dues schedule. The fee was doubled if the "fellow" option was taken. The rejuvenation effort appears to have been successful in many respects. Memberships increased substantially (from 5 dues payers to 29). The secretariat delivered on a dizzying schedule of workshops and conferences, all of which were well-attended. There were 50 workshops and 10 conferences over a 3 year period. In many of these workshops they succeeded in involving many teachers for the first time, in contrast to the historic administrative focus of the IOA. Much of the physical and logistical effort of putting on conferences and workshops was carried by the fellows who met as a group, about every two weeks, both to plan activities and to report on their separate experiences as change agents within their assigned districts. Each fellow experience was different depending (a) on the background and inclinations of the fellow, and (b) the expectations and placement opportunities provided by the district. In our study we traced the experiences of three such fellows in some detail, because in many ways it was through the experiences of these fellows that the life of the IOA was played out. One of the most visible outgrowths of the revived IOA during its second year was the development of a sub-network of teachers and curriculum and staff developers with special interest in writing. This "writing consortium" was organized and coordinated by one of the fellows and involved four districts actively and four others more peripherally. They held approximately 10 half-day workshop sessions over three school years, some involving outside experts, some involving sharing of craft knowledge among teachers, and some consisting of working sessions at which materials were developed and analyzed. The writing consortium was the only focussed activity clearly attributable to the IOA which was able to sustain itself with clear products and impacts over a multi-school year period.

During its four-year revival phase this IOA has experienced some turbulence resulting from the following factors: lack of a clear definition of roles; lack of a distinct operational base; frequent and extended leaves-of-absence by its inspirational leader; a weak, uncertain, and changing funding base; heavy reliance on part-time and volunteer effort by both university and school-based people; and ambivalence by the university regarding the proper use of its endowment; the importance of service vs. research functions; and the focus of a teacher-centered vs. an administrator centered strategy.

Some Outcomes of the Revival. While the old Council had long been known as a kind of "old boys network" for superintendents, the revived network deliberately sought and succeeded in establishing linkages at the teacher level and the principal level as well as among district staff level persons in various roles. On the other hand, the new Council has struggled without great success to expand the network beyond the original core of four affluent suburban counties, either to more remote suburban and rural areas or to the much poorer urban environments which abound in the immediate vicinity of the university.

For the school districts who are most involved, however, the Council provides a varied and continuing input of high quality expertise available to all staff levels through the many conferences and workshops that are put on. The high attendance levels and enthusiastic testimonials provided for most of these events suggests that they represent a significantly increased knowledge acquisition capacity. Inter-collegial contacts across districts and personal contacts with university professors can greatly expand the potential resource network that districts and individuals can draw upon.

The fellows program may represent the clearest effort to improve district problem-solving capacity through providing process expertise on-site. There is evidence that this was the result at some sites. For the most part, however, fellows were not able to gain acceptance as general capacity-builders but rather fitted in as the locals saw fit to roles or tasks which locals could understand and felt were needed.

In spite of the outpouring of activity generated in the revival, The Council in its present form probably does not have great impact on any of its member districts. Most of the resources it provides are also provided by other network-like arrangements and service agencies which abound in the region. Thus it is generally regarded by superintendents as pleasant, worthwhile, but somewhat inconsequential among the rather rich and varied assortment of in-service and linking opportunities available to them.

Likewise, few university informants other than the IOA staff, itself, are likely to rate the IOA in its present configuration as an essential aspect of the university, something they could not live without. Most faculty have access to schools through alternative channels and no department relies on these districts for recruitment, or pre-service training sites, or research sites, or graduate placement sites, partly because the University sees itself as connected to a national rather than a local constituency.

For the individual graduate students who were involved as fellows, however, it is quite a different story. Council-involvement gave them diverse opportunities to grow in a number of different directions: to understand other educational settings, to learn the role of linker or change agent through experiencing it, to compare experiences of challenge, frustration, and growth with each other. In many cases the initial fellow experience lead to other opportunities including development of spin-off networks such as the writing consortium, taking on linking roles in other settings, developing very solid ties to each other as a peer network and developing extended ties to educators in the region at all levels as well as to nationally-known experts recruited for various workshops and conferences.

When comparing the revived IOA with its historic version, we see a clear shift in goals toward an active service orientation and an attempt to move down into the ranks of the district to get more involvement from principals and teachers. It also represents a muting of the research role.

Institutionalization of the Eastern Private Network in Its Revival Configuration

In its present form, institutionalization appears to be somewhat tenuous. Funding remains but is continuously threatened by intermittent disinterest and competing priorities both within the districts and within the university. In its new form there appears to be less codification of procedures and less clarity regarding the scope and limits of activity. Within the university there is a commitment to continuation of field services in something like the present form but the level and consistency of that commitment is not clear. On the school district side, the commitment goes on from year to year with no assurance that any particular district is seriously committed in the long term.

Having said this much about the revived Council, we might have left the impression that it makes a rather weak case for networking between public schools and private colleges and universities. We do not believe that this is the case at all. In the first place, it must be seen as a rather heroic effort by a few people to make a bridge between these two worlds in a turbulent environment in which there are many institutional alternatives with far greater resources and legitimacy. Furthermore, total impact should not be measured only by numbers served or by the extent to which institutional memberships are viewed as essential. Rather in this case we should look to the great potential for impact on catalytic individuals at many different levels, people who can be inspired to do great things when the time and the setting are right. For

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these impacts we should not expect to be able to trace effects in linear fashion from the specific activities of The Council in a particular year.

The other two cases studied and discussed more fully in Volumes I and II of this series both represent sharp contrasts to The Council in either its original or its revived form. Each is situated in a single state and includes as a prime member the largest public institution of higher education within that state. Partly for that reason both have more elaborated infrastructures which have become official and publicly legitimized entities. This does not mean, however, that they are not at all comparable with "Eastern Private." On the contrary, there are many parallels, particularly in such areas as ideology, leadership characteristics, and the problems of coping with limited resources and marginal ambiguous roles and tasks. Herewith are brief summaries of each case.

1.2.3. Case Summary Number Three: Eastern State University and Its County Teacher Center Network

The Eastern State University (ESU) arrangement involves the College of Education's Office of Field Experiences (OFE) and various school districts across a relatively small, highly populated eastern seaboard state. There are two levels of interorganizational arrangement. The first level involves OFE and eight collaborative programs in five county school districts. Representatives of these eight subsystems meet monthly with OFE staff and thus constitute a kind of network unto themselves. At a second level there are five separate and somewhat distinct formal, interorganizational arrangements between OFE and five county school districts:

Hanburg School District
Cardon School District
Arthur School District
Bettner School District
Gantt School District*

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*Gantt County has two models of professional development which are different from the teacher centers' model in that there is no full-time coordinator handling pre-or in-service components. Rather, in the secondary education model, there is a six person group of school teachers who constitute the school-based supervision team and part-time College of Education faculty members who serve as coordinator/supervisors for the Gantt County pre-service/in-service components.

The Office of Field Experiences is approximately fourteen years old. It began in response to counties' concerns with the lack of coordination in the College of Education's placement of student teachers. Having survived initial challenges to its existence and authority as well as numerous acting directors*, the OFE of today has gained widespread College of Education faculty support as well as field support. OFE is careful not to encroach on the territory of any department and endeavors to be responsive to the needs of the field. Furthermore, by centralizing control of field experiences and by recently adding a focus on outreach programs, OFE allows for the amplification of strong field support--a component crucial for the existence of a state college of education in these times of fiscal constraint.

Turning to the counties on which this analysis focuses, the Hanburg County IOA is twelve years old while the Cardon County IOA is a relative newcomer at four years old. The Cardon County IOA is particularly interesting because it is the only arrangement with a formal governance document. This has particular significance for the stability and ultimate institutionalization of the formal IOA. One of the provisions of the governance document requires a one year notice of intent to withdraw from the agreement--a provision which allows either side to salvage the interorganizational relationship and/or to adapt to changing conditions. Both the Hanburg and Cardon arrangements were formed in response to the needs of growing counties for a "window on the market of new teachers." Today this "window on the market" is not quite as crucial as it was in the earlier days of these two counties. Thus, centers are strengthening in-service foci to complement the original, heavy focus of the arrangements upon pre-service education.

The Office of Field Experiences is headed by a Director, Rob Goldman. The Associate Director, Esther Kanter, who is a tenured associate professor, also serves as Liaison for Secondary Education. The Director's Office includes a regular staff of three (a secretary and two placement assistants who handle the nuts and bolts of placing student teachers in the field) and three graduate assistants. There is also a liaison faculty person from each College of Education department. Finally, the Teacher Center Coordinators (three from Hanburg, one from Cardon, one from Arthur, and one from Bettner Counties) as well as the Gantt County Professional Development Center Supervisors constitute the direct OFE linkages. All of the above-noted individuals attend the monthly OFE meetings. Furthermore, the Coordinators hold adjunct faculty rank in either the elementary or secondary College of Education Departments.

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*Challenges to OFE and its first Director, Bob Carter, from College of Education departments (especially the largest and most powerful department, secondary education) resulted in modifications of an initially more powerful office.

Cardon County has one kindergarten through twelfth grade Teacher Center which directly links the College of Education (through OFE) to the county schools and the county school district. With one secondary Teacher Education Center and two elementary Teacher Education Centers, Hanburg County has three centers which link the College of Education (through OFE) to the County schools.

Focusing in on the arrangements reveals some differences in linkage patterns in the two counties. In Hanburg County, all three coordinators now report to a school district official, the Supervisor of Staff Development. Each coordinator also submits an annual report to OFE. When necessary, the coordinators interact with other supervisor personnel at the school district level. Additionally, each Coordinator in Hanburg County has a formal Advisory Council consisting of teacher and principal representatives from the Center Schools.

In Cardon County, the coordinator, Debra Annonberg, reports to the Deputy Superintendent and frequently interacts directly with other district personnel including the Director of Staff Development and the Director of Elementary Education.

A Policy Board consisting of the Coordinator, representatives from the District (teachers, principals, and District staff) and from the University (faculty and OFE personnel) meets twice yearly. The University and District take turns in chairing the meetings. As do all other Center Coordinators and Professional Development Center Personnel, Debra submits her Annual Report to OFE with a copy to the Superintendent.

Rather than an Advisory Council, the Cardon County Center has an Operations Committee (with principal and teacher representatives) which meets monthly and focuses on operational decisions. The Coordinator chairs and organizes the Operations Committee meetings.

In both Cardon and Hanburg Counties, there are linkages between the coordinators and College of Education departmental liaisons to OFE. There are additional linkages in the Cardon County IOA between the coordinator and faculty members (other than departmental liaisons) who serve on the Policy Board. These additional linkages are much more loosely coupled than the liaison linkages.

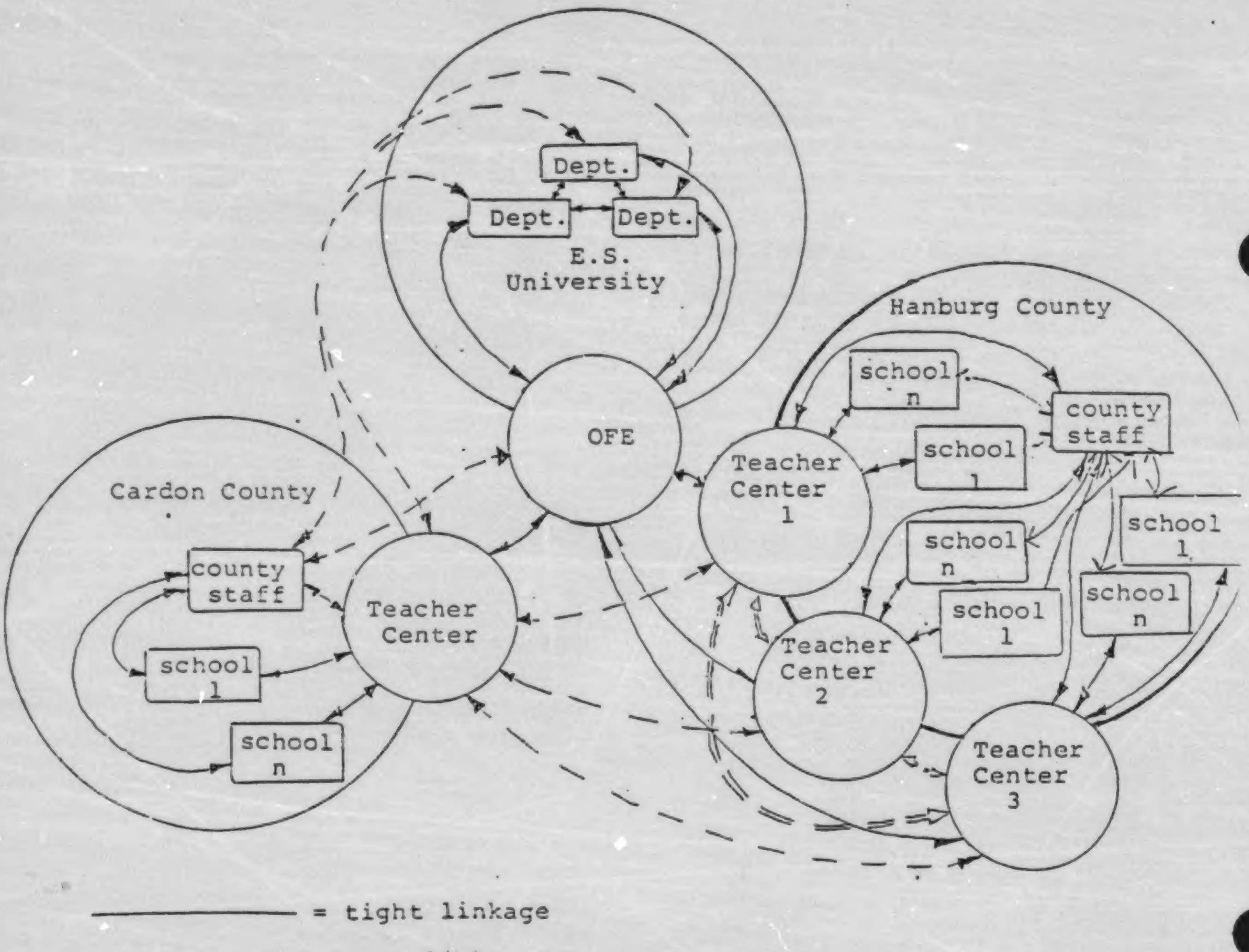
Coordinators in both counties are allowed considerable programming latitude which enables them to "read" the particular needs of the district in which the Center is set and to "shape" the role of the Center to meet those needs.

Such latitude also contributes to a sense of role ambiguity. Coordinators report that they have "two bosses," the university and the district. When it comes to decision-making, there is an advantage in this ambiguity. One Hanburg coordinator reports that "it seems to me that no one is sure--neither Eastern State University, nor Hanburg County--who is supposed to be asking what of us." And a second coordinator notes that before he instituted an Advisory Council, the typical pattern was for him to receive a fixed budget, to spend it, and to call the university or county people only when there was a particular problem, a need for special authorization or additional funds. He had a "boss" in the county office and another "boss" at the university. Typically, he met independently with each and did a great deal of business over the phone. During the last four years, OFE has become more structured about budget submissions and justifications. There is much more accountability now as well as an emphasis on the utilization of advisory board input on budget submission.

Realizing this flexibility, coordinators in Hanburg and Cardon Counties often check with one another on decision-related matters, phone Rob Goldman, OFE Director (or, less frequently, Esther Kanter, Associate Director) and then phone key district or university persons. This informal activity utilizes the linkages of the IOA but does not completely correspond to the formal decision-making structures in each county.

The following diagram illustrates and summarizes the structural linkages discussed above:

Figure 1.1
LINKAGES: EASTERN STATE INTERORGANIZATIONAL ARRANGEMENT


Dept.
Dept.
Dept.
E.S. University
Hanburg County
school n
county staff
school 1
OFE
Teacher Center 1
Cardon County
school 1
school n
school n
county staff
Teacher Center
school 1
school 1
school n
Teacher Center 2
Teacher Center 3

———————— = tight linkage

------------- = weak linkage

Outcomes From the Eastern State Network and Teacher Centers.

The initial inpact of these IOAs was to enhance recruitment selection of new teachers ("provide a window on the talent") on the part of county and school organizations and to provide stable sites for student teacher placement on the part of the university organization. Related to these outcomes was the exchange of fiscal/administrative resources to support on-site student teacher training: the county organization provided office space and equipment on-site as well as a part-time secretary while the university provided a graduate assistant, funds, and courses. Both organizations shared the salary and selection of an on-site coordinator.

Over time, however, other impacts became more and more important. In-service opportunities were provided for staff leading in Hanburg County to development of a support system and esprit de corps for teachers. There was a changed organizational climate at the Hanburg School building level: the production norm shifted "to another level, a more intellectual level" with "more sharing" and "more freedom to talk about ideas and dissent." Similarly, there was change in Cardon County at the district organization level with the IOA's provision of "help not to lose perspective" and with "internalization of a scholarly perspective."

Against the backdrop of lessening needs for new teachers, both IOAs (as well as the IOA as a whole) have begun to focus more and more on in-service offerings tailored to the needs of the specific county and school organizations. In turn, the university and its faculty have benefitted through the acquisition of loci for on-site graduate programs (and the concomitant increase in enrollments) as well as for field research. A faculty member reported that when she was writing a grant proposal, the Cardon Teacher Center Coordinator collected approximately four letters of support from school district people in less than an hour! Additionally, several publications and dissertations have come from joint Center faculty and school system efforts.

The IOAs in both counties have contributed to other changes in the capacities of participating individuals and organizations. Teachers have enrolled in courses, workshops, and seminars and/or have acquired books,materials,and lamination. They have also had access to conference fees, professional associations, and intervisitations; they have received support for research in a group setting (Cardon County) and a one-on-one setting (Hanburg County). Student teachers have developed classroom skills in an environment characterized by support at the school building level and development of an esprit de corps. They have had access to more than one model. Related to center placement of student teachers was the flexibility of coordinators to make placements and to trouble-shoot on site - a dual benefit to both county and OFE organizations.

Certain outcomes depended on the particular talents and inclinations of the coordinators. In Hanburg County, there was a coordinator who was perceived by principals as being able to help teachers whom administrators could not reach. In Cardon county, there was a coordinator who was perceived by district personnel as being able to problem solve through identification of appropriate resources and through participation herself on district problem-solving committees. The focus in Cardon County was District-centered; the focus in Hanburg County was teacher-centered. Thus, there were greater teacher impacts in Hanburg County than in Cardon County where the major teacher outcomes were use of equipment/laminating materials at the center and enrollment in courses and workshops.

Limitations of the study precluded a systematic evaluation of improvements in educational practice at the classroom level. However, attitude changes which could be related to practice improvement were reported in both counties studied. In Cardon County there was "a coaxing up" of teachers who, in the presence of student teachers "had to be on top of everything."

Similarly, in Hanburg County, teachers were "on their best behavior" due to the presence of student teachers. Student teachers also used skills and techniques in the classroom which could then have been adapted by operating teachers and other teachers who either observed the cooperating teachers' classrooms or participated in the Center coordinator's seminars.

Evidence for Institutionalization of Eastern State Arrangements

In concluding this brief summary of the Eastern Public case it is important to note that institutionalization has been achieved in a number of respects both at the level of the arrangement as a whole (the OFE network) and with respect to each of the county arrangements studied. At the College of Education OFE seems to have a secure status as a structural element with a recognizable importance and clear lines of responsibility, function, staffing, and budget. Although there have been transformations over the years that have reduced scope and visibility, these changes have also brought stability and reduced tensions. A survivor of budget and interdepartmental battles over 14 years, the OFE seems destined to continue in something like its present form into the mid-1980s and perhaps beyond. Within the overall arrangement, relations with particular county districts will likely ebb and flow as they have done in the past, but in the two counties studied arrangements for the present seem secure. The three centers in one county now have survived over ten years, including more than one leadership turnover, and have managed to retain level funding when many other programs were going under. The Cardon County site, in four years existence has also survived a leadership turnover, and with its solid contractual base and governance arrangement seems reasonably secure for the near future.

1.2.4. Case Summary Number Four: The Midwestern Statewide Network and Its Teacher Center Satellites

The Midwestern Teacher Center project operates in a large, relatively sparsely populated State, such that school districts and state colleges are isolated from one another, especially during the winter months. The State is wealthy, with one of the highest per capita income levels in the country, but its investment in education, especially at the school level, is comparatively low, given its resource base.

In 1976, a college dean at North Central University and his associates generated the concept of a federation of teacher centers spanning the State and loosely linked through a coordinating body comprising delegated teachers, administrators and college staff who would jointly manage each of the local teacher centers. The idea was to build a "statewide network" of professional development centers for teachers, with a home base at North Central University, one of the two major State institutions of higher education. The project subsequently received funding from a private foundation and opened with four teacher centers in 1977-78. By 1980, nine such centers were operational in the state, with plans for the creation of two more the following year. Each center was viewed as unique and locally grounded; when they came together, it was chiefly to exchange experiences, plan collaborative projects, discuss educational policy at the state and local levels and decide how to allocate their foundation funds.

This state-wide network had an ideological core. The project's founders believed that increases in pupil achievement and social-emotional competence would only result from a corresponding provision for continued professional development among teachers. Pupil growth was predicated on teacher growth. Also, it was felt that teachers were their own best judges of the type of upgrading, experiences, and resources they would need. Essentially, local learning institutions such as universities and district-administrated in-service training should pattern their programs on the staff development needs articulated by teachers as a vehicle for improving their instructional practices. There was also a corollary: teacher-generaged craft knowledge was seen as a powerful and valid base for designing curricula, instructional formats and modes of evaluation. A mechanism was needed to provide the exchange of craft knowledge, including the dissemination of promising new practices and products, and to distill these data in a form which university-level staff could translate into their teaching and research.

Many of these ideas had already been incorporated in an experimental degree program at North Central University, which had attracted national attention before and, to a lesser extent, after it was re-integrated with the existing college of education. The program drew a large number of recruits across the State, in particular, a group of enterprising school administrators who, after completing the M.A., and, for about 15, Ph.D. degrees, took on key responsibilities as local district-level administrators, state college professors and deans and senior administrators in the State office of education.

The dean also figured prominently in the proposal writing and negotiations resulting in a five-year grant of $400,000 from a private foundation. The grant helped to pay salaries and the purchase of materials at the four founding centers, but provisions were made in all cases for local school districts or State colleges to pick up progressively the full costs of teacher center operations by the end of the five-year period. Each of the four centers had a unique program, but all included a basic repertoire of one-shot workshops, an ongoing resource bank of materials, special projects (e.g., poets working in local schools, introduction of micro-computers), meetings among teacher and community groups and more consequential or continuous training events leading to B.A.-level or M.A.-level credits. Each center also had a "policy board" comprising delegates from the local teachers' union, district office, state college or university and, in some instances, from the local community.

State-Level Outcomes. The State-wide teacher center network has been chiefly an assembly of individual centers, to which its delegages minister. Its effects are more palpable at the local level, which is also in keeping with the prevalent policy of de-centralization, uniqueness and networking. There have been, however, secondary effects at the State-wide level along with outcomes in local centers which result from their participation in a collective enterprise.

In itself the State-level network has barely achieved a firm institutional identity in its relatively short life. In has, however, created a distinct role for itself as a vehicle for the dissemination of new curricula, media (e.g., educational T.V.), special projects (the State's Centennial Celebration) and of some teacher upgrading efforts. The nine existing centers practically blanket the State, each covering a large number of school districts and, as such, streamlining dissemination from the State office. Relatedly, participation in the State-level network, and more particularly, in its policy and advisory boards, have increased the local status of its delegates, who are perceived as more cosmopolitan, better connected and more influential at the regional and State levels.

When network delegates assemble, the result is a state-wide forum for discussion of educational issues between teachers, school administrators, college and university staff and state-level administrators. These discussions have direct impacts on state educational policy and on local policy. Similarly, meetings of the advisory board and of the several teacher center coordinators accelerate the diffusion of new ideas and of new techniques or products appearing to have "worked" in one jurisdiction. In a more general sense, state-level meetings and coordinator projects increase exchanges of practice-relevant knowledge among educators who typically have very few cross-role cummunications, (i.e., between college professors, school administrators and teachers) and a sparse diet of within-role exchanges due to their geographical dispersion.

The four original centers have had varied fates. The two studied in detail, Arcadia and Three Rivers, have measurably increased their offerings, audience, and base of support, although Three Rivers has been weakened by staff turnover and by uneven support from district administrators. Less data were collected from the other two founding centers, but there is evidence of personnel turnover and indications that local superintendents and State college deans are unwilling or unable, in a fiscally lean period, to make up the full amounts of the foundation grant as that source is depleted in 1981.

The five centers which became operational in 1979-80 have had rough sledding, although data are thin here as well. Making one's way economically and politically in the local landscape was not easy. It appeared that firm patronage and commitment at either the State college level or district office level was harder to obtain than for the first four centers. Nevertheless, the State-level policy board of the Teacher Center Network went ahead with plans to consolidate existing centers and to open two new ones.

Funds have been difficult to come by. Three funding proposals - to the foundation sponsoring the original grant, to the State-level education office and to the federal government - have been turned down. Some small-scale projects have been launched (writers in the schools, in-service upgrading of the qualifications of multi-age classroom teachers.)

It is not clear what will happen at the State level when local school districts and/or colleges assume total funding. There may well be only a skeletal coordination function, such that the whole network is little more than the sum of its individual centers. With State or federal funding, on the other hand, the network can expand to a more prominent role in disseminating new practices, systematically upgrading teacher qualifications, and multiplying exchanges between knowledge-producing and consuming institutions. What is already clear is that the network has led to the local creation of intermediary centers spanning colleges or universities with schools and thereby increasing both the rate and the amount of practice-relevant knowledge flowing into both institutions. Finally, there has been a uniform process of goal enlargement within the participating colleges and universities as a result of their affiliation with these centers. The in-service training function has increased significantly by relation to the pre-service function, and the involvement of college staff in instructional problem-solving has risen concurrently.

1.2.4.1. The Arcadia Teacher Center

Arcadia was the primary locus of site analysis. It represents the most successful of the teacher centers in the Midwestern network in terms of rate of expansion, scope and magnitude of outcomes achieved and solidity of institutional foundations. In fact, to the extent that site and program characteristics can be replicated, Arcadia is a good candidate "model" for the creation of intermediary agencies successfully spanning community colleges and local schools.

The teacher center is located in the basement of the local community (State) four-year college which services the surrounding area. Both the college (650 students including 335 teachers in training) and the town (pop. 3,000) are small, as are the surrounding counties, but two of the largest cities in the State are nearby (40 miles and 60 miles). The area is prodigiously fertile and, to listen to local inhabitants, immensely wealthy, although little of this is conspicuous in Arcadia itself and in Arcadia State College.

The center is staffed by a full-time coordinator, Dr. Lessing, and full-time staff member, both of whom carry full teaching loads as associate and assistant professor, respectively, in the elementary education department of the college. There is a part-time secretary/documentalist and some work-study college students to help with cataloguing and use of the center's video equipment, canoes, skis, etc.

The center is an outgrowth of the coordinator's teaching. Working exclusively with elementary-level teacher candidates, he found the traditional lecturing and seminar format to be both restrictive and too far removed from natural classroom conditions. As he accumulated an ever-increasing stock of materials (instructional kits, activity books, reading series), integrated curriculum displays ("learning centers"), to better approximate the type of "methods" or "strategies" used by classroom teachers, the lecture rooms at Arcadia State became cluttered,thereby annoying colleagues. Dr. Lessing then cast about for more space, identifying and obtaining an unused cafeteria 75' by 75' along with two adjoining rooms. The room was gradually refurbished and cumulatively stocked with scrounged material, and became an enormous repository of curriculum materials, texts, learning packages; teacher-made ideas and games; science inquiry and observation units; mathematical reasons idea books and games; audio-visual materials (filmstrips, records, and later, video tapes); cooking and sewing equipment; carpentry materials and darkroom equipment, often arrayed by theme or, as in the case of the pre-school area, set up as in a materials-rich classroom. These several areas were reconfigured periodically and consistently added to in such a way as to make all materials accessible for easy browsing. Interspersed among these resource arrays were smaller areas with indirect lighting and armchairs or sofas for conversations, informal seminars or for reading the professional and general public magazines on surrounding shelves. The adjoining rooms were used for instructional and office space but also held displays of reading series, and later on, were expanded into specialized resource banks for activities in nature study and energy education.

In the academic year 1976-77, Lessing had just taken over the abandoned cafeteria and was using it as an instructional space and resource center for pre-service teachers taking his "teaching strategy" courses. He was then offered part of an in-service training project to upgrade the formal credentials of pre-school teachers, which initiated him into in-service training, provided funds for the purchase of more materials and involved team-teaching with staff members in his own and cognate departments. At approximately the same time, he was contacted by the dean at North Central University, who sounded him out on Arcadia's interest in the proposed Midwestern Teacher Center Network. Lessing had done his doctorate at North Central

University under the experimental graduate program. Of the four charter teacher centers receiving foundation funds in 1977-78, Arcadia was the only center that was already functioning.

But bulk of the foundation funding appears to have gone into the enrichment of the resource bank, which rapidly became voluminous. Increasingly, local and county teachers were asked to recommend purchases, all of which were made, including in areas such as driver education, music, and dance, and more significantly, in all the secondary-level subject areas. By 1979-80, approximately 200 items were either checked out or returned each month by area teachers during the school year. By 1980-81, the center had logged about 3,000 "users" (workshops participants or drop-ins) annually, many of them repeaters. Field researcher estimates of use were that 65% of elementary-level teachers and 35% of secondary-level teachers were habitual users of the center, i.e., used it for several functions.

Apart from the resource-borrowing function, the center developed and refined a core set of in-service formats:

- A one-shot workshop series on general topics (Nazi Germany, children's literature, dramatization of poetry and theater);
- A two-week internship, during which local teachers brought their classes in daily for instruction in new "teaching strategies" by pre-service students;
- Participation in one or two projects common to at least one other center in the state-wide network (poets in the schools, energy education)
- A one-week summer workshop, during which participants formulated a classroom-level project, consulted both the resource bank and staff in the appropriate departments at Arcadia State, took the resource materials back to their classrooms and submitted samples of lesson plans and pupils' work to teacher center staff;
- Summer workshops by theme (reading in the content areas, nature studies), usually involving the production of materials and simulated use under classroom conditions;
- A project involving the local community, e.g., the design of a nature studies area adjoining the town, to which county teachers could bring pupils and which residents could use as a park and cross-country ski area.

Many of these ventures had common organizational and political features, which constitute a starter set of mediator variables helping to account for the pervasive, often dramatic outcomes of the center listed briefly below. First, all activities were centered around materials. Pre-service students and in-service workshops participants spent most of their time examining, discussing, making and, when possible, trying out the various kits, games, idea formats series, and back-up equipment. Basically, craft knowledge was generated, communicated, evaluated, and refined through interactions between artisans. Secondly, many of the workshops were linked to some sort of follow-through activity. In the summer workshops, for example, participants had to try out the practices they had planned to implement while at the center and to report on them. Teachers visiting the nature studies area were expected to do follow-up exercises. Teachers who had requested pre-service students to model an inquiry approach to teaching science typically felt motivated and obliged to follow through, especially since they had observed their own pupils being taught. A third and less tangible feature was the low-key congeniality of the setting: browsing, workshops, even pre-service instruction were carried on in an informal, physically comfortable space (described in the center newsletter as "informal and industrious") to which participants appeared to come eagerly and to remain as long as possible. Some informants spoke of a "community" or "sort of a family" built up in and through the center. This was especially the case with former pre-service students who then returned to the center as in-service workshop participants or browsers-borrowers; but it was equally true of veteran teachers who explained their sentiment by evoking the "professional respect in there; it's like professionals talking to other professionals who care about them." These are elusive qualities to evaluate, but they were continuously mentioned by informants and seemed to cluster around such attributes as the informality of the setting, the non-threatening nature of discussions and experimentation with materials, the responsiveness of center staff to requests and the creation of new interpersonal networks between teachers in schools within a 50-mile radius of the center. Finally, the center coordinator made repeated attempts to involve other Arcadia State staff in the center, either as resources for summer interns designing a project, as part of a team to carry out a short-term training session or simply as users of the center (borrowing materials, teaching their courses in the center).

Arcadia Teacher Center Outcomes. The two center staff members, their department and the Psychology and Education section enjoyed an enhanced institutional reputation with the widening awareness of the Center's success and collected a series of bargaining chips which were later traded in the form of increased physical space for the center and a projected increase in staffing in the five-year plan. The center became something of a showpiece for the department and the State college who were competing with neighboring institutions for high-school graduates from a fast-declining pool of teachers in training. That Arcadia held its own not only in recruitment but also in subsequent placement of its graduates was attributed to a great extent to the center, which then enjoyed enhanced status. There were other forms of usually implicit bargining and exchange. For instance, school administrators reciprocated teacher center services by giving teachers more released time during school hours, by bussing pupils into the center for work with pre-service candidates, by donating materials.

At the individual level, teachers reported a more intense and consequential exchange of materials, ideas and instructional techniques as a result of teacher center use. Much of the exchange occurred primarily at the center, but some resulted from social networks created after workshops were over. There were also systematic reports of increased professional exchanges within the schools; teachers would, for example, return from the center with "a surprise" for a colleague or, alternatively, would pass on materials or idea formats to others. Time was also set aside during staff meetings to propose purchases, workshops or special projects to the center, an activity which involved local teachers in more substantive exchanges.

There was a similar phenemonon within the State College. Staff members in the center worked together on a daily basis; other departmental members came in for special projects or as resources. Team-teaching experiments were undertaken across departments whose members worked as well with pre-service teachers. More distant departments (music, mathematics, physical education) borrowed center materials or taught courses there. More significant, continuous links were established between local schools and the center, whose staff considered itself "on call" to the eight school districts it serviced.

Testimony from teachers was embarrassingly evangelical, with references to "rejuvenation" and "revitalization." Basically, as one informant said, "I use the center to feel I'm an O.K. teacher," to ward off stagnation and "get re-enthused." The center provided a sense of "feeling abreast with my field" and "getting updated," which took on more significance in a rural region which had had, up to that point, almost no resources for professional development aside from summer courses. Several informants also mentioned pressing their superintendents for more local in-service as a consequence of their center experience.

Within the college, the two center staff members dwelled more on the costs of a drastically increased outreach activity. Both felt they had less time available for teaching or course preparation; one felt that the strong emphasis on hands-on teaching reduced course coverage and more conceptual inputs. At the organizational level, however, the center thrived. During the 18 months of this study, its physical space was doubled, its support staff put on stable college funds and its program made the centerpiece of a proposal to grant graduate-level certification for a new program in elementary education.

Such a program would, of necessity, generate revenue to the college through in-service enrollments.

Practice Improvement Outcomes at Arcadia. Teachers reported uniformly an enriched materials base and a more diverse repertoire of activities as a result of center use. Some tied this to pupil gains; most claimed more generally that they were more effective in the classroom. This was especially the case for areas in which teachers felt weak, a finding replicated at the Three Rivers site (see below). There were two additional findings of interest. Informants invariably mentioned at least one incident in which the center served as a crutch, stimulant, or repository for undertaking changes in the classroom. Many felt that they would not have followed through on these projects without the structure provided in the workshop format. All claimed that classroom practice had been measurably improved; most said that they were encouraged thereby to try another, sometimes more ambitious, project. A second finding of note: although all respondents felt that the center was pluralistic, i.e., did not advocate a particular approach or theory, several remarked that their style of instruction had changed. There was more pupil self-direction, individualization of instructional treatments and integration of curricula as, for example, in a learning center approach observed in one school. Much of this appeared to stem from the materials-based nature of the center's resources and from observations of pre-service students using inquiry and simulation approaches with the visiting teacher's pupils.

Institutionalization at Arcadia. Teachers have come to view the center "as an extension of my school; it's the first place I think to go when I have a problem or when I start getting organized in the fall." Workshop participation also appears to be built into their professional routines, as does the ordering of materials and the scanning of the newsletter for new materials received. Local and district school administrators appear to view the center as a bottomless resource repository for their staff for which they pay virtually nothing. The State college administration also supports the center unequivocally and derives very tangible rewards from it. The portion of budget accounted for by the foundation grant has been picked up by the college.

1.2.4.2. The Three Rivers Teaching Center

The Three Rivers teacher center is situated in one of the larger (pop. 45,000) cities in the state, one whose economy depends to a great extent on North Central University and a nearby military base.

This center resulted from two years (1975-1977) of informal talks between staff at the college of education at North Central and delegates of the local teacher's union. Some of the participating teachers were skeptical initially, feeling that the university was too far removed from local practices to be effective and fearing university control of teacher center activities. There are indications that teachers felt intimidated by the university, so much so that one of the prime achievements of the center was that of reducing social distance between the college of education and local teachers.

Similarly, local administrators were doubtful about the venture, questioning the ultimate utility of teacher-directed in-service training and looking ahead to the time when the entire teacher center budget would have to be picked up by the district. An early proposal by the dean was flatly rejected, but a later effort involving a faculty member with good Three Rivers ties was accepted by both administrators and teachers, in part because the concept was attractive and external funding was available.

The initial two years (1977-79) were rocky. The district provided poor facilities (a reflection, perhaps, of the priority given the project), and eventually refurbished a garage appended to the city's library at one edge of the city. These quarters were gradually rearranged, attractively decorated and well-stocked with materials, but their limited size (about 1/3 the original space of the Arcadia Center) and their relative isolation continued to plague teacher center staff and users alike. At the same time, ineffective leadership and staff turnover made for an unstable enterprise, kept alive essentially by external funds, the strong commitment on the part of North Central University and the perceived viability of the teacher center concept.

By the 1979-80 school year, the center was on its feet, having found an energetic and interpersonally skillful co-coordinator, Brenda Kane, a graduate teaching assistant in elementary education at North Central. There were, however, departures of two co-coordinators and persistent role confusion among center staff. During those two years, a diverse and relatively successful activity format was elaborated, consisting of:

- one-shot workshops, for the most part on practice-relevant topics such as geometric art, songs for the classroom, using the newspaper in the classroom, etc.;
- continuous workshops, some of which were used for graduate-level credit at North Central University (law for educators, adolescent development);
- drop-in and materials-lending;
- meetings or local community groups;
- "sharing" evenings for specialized teaching units, e.g., special education teachers, mathematics teachers;
- display and circulation in district schools of "activity centers" (integrated curriculum units with suggestions for in-classroom activities)
- special projects, some of which were carried·on also at other teacher centers in the network (poets in the classrooms, micro-computers)
- on-call services to building administrators and users.

In 1979-80 and 1980-81, the center became increasingly visible to district and, progressively, to outlying county teachers. Attendance and drop-ins increased; the center registered 2,200 users in 1979-80 and 3,000 in 1980-81. Of these, there emerged a small core of teachers, mosly at the elementary level, who drew on center staff not only as resource finders but also as solution-givers and process helpers in implementing

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instructional changes. Support by principals also grew. Both the poets in the classroom and micro-computer projects were successful, the latter significantly so: teachers reconfigured classrooms, called on one another as consultants and reported dramatic gains in pupil motivation, engaged time on task and achievement.

The center also experimented with the formula of teachers giving workshops to their peers, with mixed results. There is evidence (see below) that practices circulated more rapidly within local schools as a result and that both workshop leaders and their principals bathed in the glow of social recognition for their new roles. But there is also some evidence of partial boycotting of teachers perceived as "prima donnas" or "arrogant" by others who found it hard to acknowledge the merit of practices invented by their peers.

In the fall of 1980, as the Three Rivers district met to elaborate a reduced budget for the next calendar year, funds for the teacher center, including a sizeable increase in the proportion to be carried by the school district, were stiken from the budget, on the ground that they were less critical than activities impacting the classroom directly. Involved in this decision were the two assistant superintendents who served on the teacher center policy board. There ensued a rapid mobilization of local teachers and university staff, who intervened with school board members prior to the session itself. Eighty percent of the teacher center budget was reinstated. The incident appeared to have boosted support from the teaching community, even among non-users who spoke of "them" (district administrators) taking away "our" teacher center. Local ownership appeared far stronger after the incident. Nevertheless, the twenty percent budget shortfall led to a reduction in the activities and drop-in hours of the center, and several teachers predicted that when the district took over the full costs of the center, it would act gradually to dismantle it.

Outcomes. The center provided status enhancement to teachers in three ways: giving social recognition through the investment made on their behalf by North Central professors, acquiring credits toward post-graduate degrees which could eventually aid in promotion, and enhancing the status of those teachers who gave workshops on their own practices. The university gained in status for having originated the state-wide network more than for having helped to found the local center. The teacher center coordinator, who was a graduate assistant at North Central University, came to be perceived as an expert on the needs and characteristics of practitioners, and to take on the role of the formal conduit between the university and local schools.

There were also some power shifts worth noting. As the teacher center centralized the bulk of in-service training, district administrators and school principals lost some control over the choice of training events and trainers. Here was a classic instance of tacit inter-institutional bargaining; the school district gained in capacity but lost in control and implicitly agreed to the transaction.

One project involving microcomputers induced a considerable number of within-building exchanges. Some exchanges of materials, experiences and ideas between buildings were also reported. Institutionally, the teacher center provided a more formalized structure for access to university expertise, replacing to some degree the "old boys' network" which school administrators had used to contact university staff on a problem-by-problem basis.

At the university, individual professors in the elementary education department felt that they now had more contact with and interest in practitioners, whereas their prior concerns had been primarily with pre-service students. For the college of education as a whole, the teacher center had become the chief, if not the sole, vehicle for contacts with local schools. Increasingly, in fact, the teacher center played a linking role, putting university staff in contact with school personnel, organizing certificate-granting programs to be attended by teachers and taught by North Central staff, matching research foci in the elementary education department with expressed needs of teachers as these surfaced during teacher center events.

Individual teachers associated activity at the center with professional growth. Testimony was not as strong as at Arcadia--possibly because of the absence of alternative knowledge resources in Arcadia--but the direction was similar. Teachers felt they could remain "up to date," that they now had more resources available for practice improvement and thatthe center was a stagnation-fighter, a source of skill extension and a stimulant to the adoption of new practices. Finally, the center provided teachers with access to "the best practices other teachers around here are using."

Organizationally, teachers and administrators credited the center with increasing the circulation of new ideas and practices, with providing a support system for teachers which had been more random and fluid in the past and with the more rapid dissemination of university knowledge and instrumentation. The final item warrants an illustration, since it touches the core of knowledge transfer between knowledge-producing and using units. A math professor, in experimenting with the measurement of children's computation and logical reasoning processes, began to use micro-computers both as a diagnostic and an instructional device. He showed the device to staff members at the center, who organized a workshop, for which the professor provided sample programs and the micro-processor itself. Very rapidly, the hardware and programs were checked out and extended (a wider range of programs, a second micro-processor), with wide-ranging impacts at the classroom level. The story ends ultimately with the purchase by the district of 17 micro-processors, largely as a result of teacher center activity.

The professor's interaction with in-service teachers also led to revisions in his teaching at the university and his research orientations, both of which became "more complex, more open to dissonant information, more of an asker of questions than a delivery of solutions."

There were other modest institutional changes at the university which merit mentioning: a shift in priorities more fully to in-service training and consultation, increased revenues through enrollment in center-organized workshops which could be used for continuing credit, extension of resources for coursework to the teacher center resource bank and, on a less sanguine note, role overload on the professors in the elementary educational department who worked closely with the center.

The Three Rivers Center was defined, perhaps more sharply than the other centers, as a resource for, between and by teachers. That the university chose to sponsor such a center and to elevate the social status of craft knowledge was an additional reinforcement. Along with increments in craft pride came some raising of collective consciousness and, with that, a somewhat more militant note in discussions with school administrators.

Practice Improvement. Teachers reported that the center had helped demonstrably to enrich their curriculum and store of instructional materials, and had led to more diversity in the organization of classroom instruction. The same finding emerged from a survey conducted by a North Central graduate student. The center also served to make teachers stronger in areas in which they felt underqualified, particularly in science. Where activity centers had been distributed and teachers had taken workshops in this domain, there was evidence of greater integration of curriculum in the classroom. The micro-computer and poets-in-the-classroom projects both led to assertive claims of instructional effectiveness and pupil gains.

In the university, staff members who had worked with center participants claimed that they now had "a more complex vision of school practice" and that their teaching was more practitioner-sensitive, more "grounded." For the few who had research activity underway, the outcome was analogous. In a more macro-organizational sense, the dean felt that the center provided a more rapid and efficient conduit for the dissemination of conceptual and instrumental knowledge from the university to practitioners.

Institutionalization. The Three Rivers Center is not strongly institutionalized. Although its outreach is increasingly wider (according to center statistics, nearly half the elementary level teachers and one-quarter of the secondary level teachers in

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the district used the center in 1979-80), its activities are not seen as indispensible to district teachers or administrators, nor to the university staff as a whole. Its strongest support comes from Saganne, the college dean, a prime mover in the founding of the center to which he has a personal commitment. But the center is, here as well, "only one of our commitments and not a major one compared with our teaching." The center appears to be orphaned, without strong claims of ownership made by the the university or the school district. Only recently has teacher commitment solidified, and it may be more related to teacher-administrator conflict than to center support per se. Rewards accruing to teachers are concrete and numerous, but they mesh with other practice-improving inputs available in the district which thus dilute the impact made specifically by the teacher center. Rewards at administrative level are also present, but are intermixed with reservations about the whole enterprise. Few university staff profit directly.

Stable funding is uncertain. Unlike the Arcadia center, Three Rivers has no back-up resource base. It pays for its autonomy in reduced budgetary and institutional support, having already been cut back for 1981. Nor does it provide steady rewards for its personnel, among whom more turnover is likely. Ironically, although the Three Rivers center has become highly visible and familiar to local practitioners, and has created durable links with a small set of university staff, its institutional base remains fragile.

Institutionalization of the State-Wide Network. As a set, the 9 centers have not as yet achieved stable institutionalization (see table VI-1), in part owing to their youth. They are seen locally as a legitimate, even inspiring organ for staff development, but not as a core function. They provide clear rewards to teachers and, thereby, to school district administrators, but are sometimes viewed as "frills" by the latter. Their relationship with the State colleges or universities to which many centers are connected has been, on the whole, tentative, but it has drawn these institutions into an expanded in-service role, whereas their conventional mandate was almost exclusively pre-service. Support is still soft, especially in the case of

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new centers with an embryonic set of activities and no firm budgetary base. As these centers turn to school districts and colleges to which they are only partially yoked and which themselves are financially strapped, they come away with little. Support has been stronger in cases where teacher centers have sponsored workshops or courses which are then applied as college-level credits. The college earns revenue from programs which the centers have designed, publicized, housed, and administered. The data suggest that, as the web of often implicit and non-programmatic interdependencies between centers and state colleges grows and differentiates, local support increases and other kinds of knowledge-based exchanges occur between teachers and college staff.

1.3 PATTERNS

The task of this volume is to put together the lessons from each of these cases. To do so we must first establish some crucial underlying similarities, that is, to demonstrate that in each case we are really talking about the same kind of phenomenon. Having done this, we then need to establish some important and interesting differences, differences which will be instructive to future efforts or those who would engage in them. To identify such similarities and differences, we need to abstract from the narratives certain patterns, schema or frameworks of understanding. Perhaps the most obvious of these is the structure of interconnections between people and between organizations which they each represent. Having defined the structural properties and having noted their similarities and differences we will then want to delve into substance, beginning with the motives of the parties which they bring together. Generally speaking each arrangement can be seen as a complex transaction involving the exchange of many items, goods, services, money, ideas, inspiration, approval, knowledge, etc. How are these transactions similar and different among the three cases? A third way to look at the narratives is as representations of systems, entities with boundaries and purposes and products, with self-maintaining and self-enhancing capacities. How clearly delineated and viable are these arrangements as organic systems? Are some more viable than others? Can productive transactions occur between complex organizations without the mediation of arrangements which are, themselves, reified as organizational entities? A fourth type of pattern which we think comes through these narratives occurs on the time dimension, changes over time, growth, maturity, decline, revival and so on. We call these patterns the "rhythms of time." There are, of course, other patterns beside these four, but this is a good starting set which allows us to address the most important questions in this study.

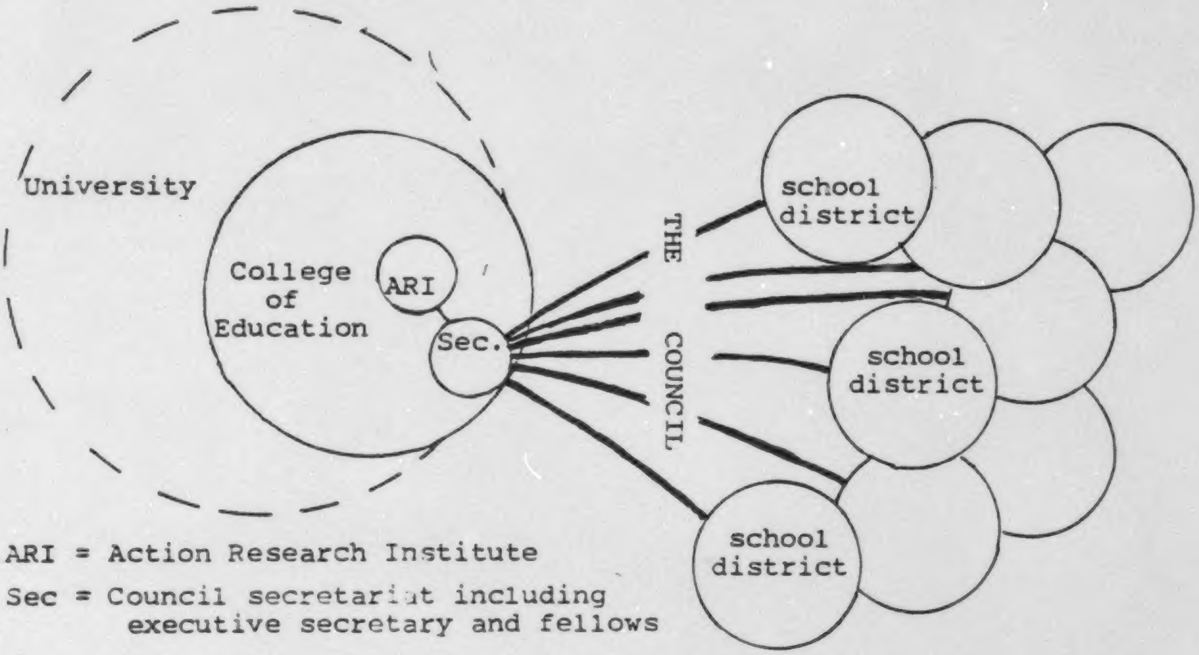
1.3.1 IOAs as Connective Structures

As the term implies, "interorganizational arrangements" (IOAs) are first of all connectors between organizations. But what are organizations? They, too, can be viewed as sets of connections. The simplest organizations consist largely of people and their connections; the more complex involve sub-units or sub-organizations and their connections as well. Thus a complex organizations is already an "interorganizational arrangement" in a very real sense. What we mean, of course, is that we are looking at new connections that are made between pre-existing organizations within which there are pre-existing connections of a stronger and more durable type. Already with these words, however, one can see the dilemma: are these intra-organizational ties always stronger and more durable? And if they are sometimes not so, what are the consequences for the "organizations" so connected? The possibility then arises that new interorganizational arrangements can threaten and even destroy existing organizations, and as these connections become stronger, the IOA takes on more and more the aspect of an organization itself.

In the cases we studied, interorganizational connections were generally much weaker than intraorganizational connections. In a few instances, however, this seemed not to be the case. In the first case of the historic Council, interdependencies within the IOA became extremely strong and led to the formation of a sub-system of high potency and productivity in its own right. In the last case of the Arcadia teacher center the same level of potency and intensity of interaction and attachment was achieved within a microcosmic educational environment but without the isolation of the IOA from the college in which it germinated. In the other cases one senses that IOA connections were less salient than prior organizational connections with the exception, perhaps, of one or two individuals.

In the series of figures which accompany this text we wish to illustrate generally what each IOA looked like structurally. For the two Eastern cases there were a number of school districts connected to a single college of education. For the Midwestern site there was, in fact, a network involving the college of education at the major state university and several smaller four year public colleges, each engaged in teacher training and certification. As Figure 1.2 indicates, the Council at Eastern Private in its revived form was structurally rather simple. Each school district purchased an annual membership in the Council which was thus constituted of school districts with a governing board of school district officials (originally all superintendents, later extended to include two principals). Nearly all the substantive work of the Council was carried out by a secretariat housed in the College and acting essentially as College employees, a tenured professor-director with the title of "Executive Secretary" and between six and twelve graduate students. Roughly half of the support and nominal supervision came from the Action Research Institute and its director. Virtually all decisions and actions of the Council were initiated by the Executive Secretary

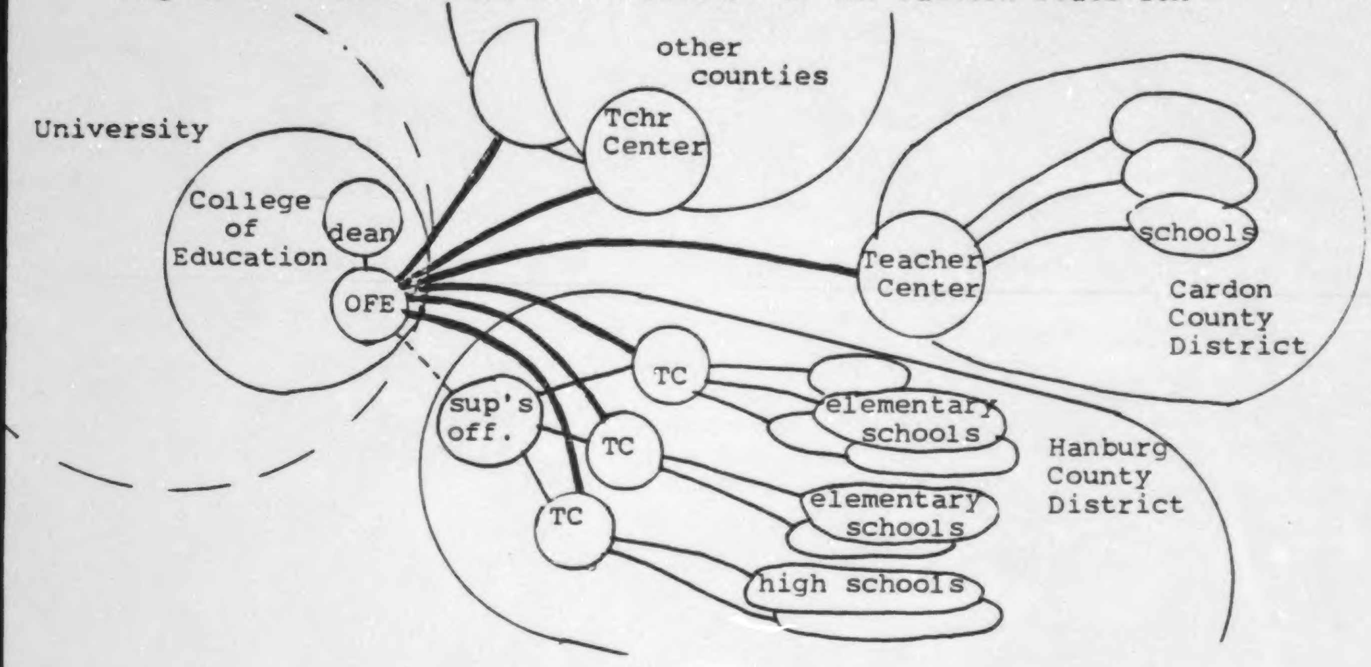
Figure 1-2 Basic Connective Structure of The Council [Eastern Private]



ARI = Action Research Institute
Sec = Council secretariat including executive secretary and fellows

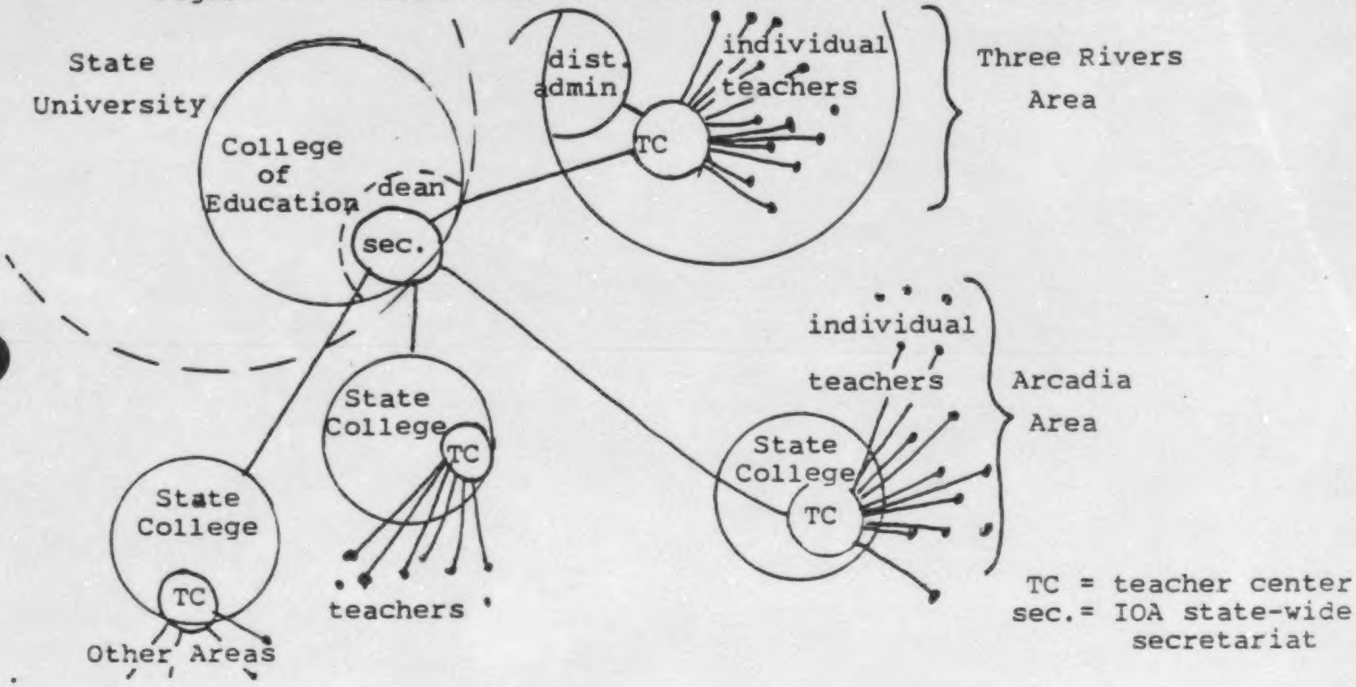
stimulated by discussions with her graduate students. The Board was also sometimes used as a sounding board and occasionally a source of suggestions. The Board routinely approved initiatives of the secretariat and seemed happy to leave it that way. For the most part the ARI ignored the Council. When involvement came it usually revolved around fiscal matters, especially the need to squeeze the budget and/or find other funding sources. Figure 1.3 displays the essential structure of the Eastern State IOA. Immediately we can observe a more complicated structure with "teacher centers" as key elements.

Figure 1-3 Basic Connective Structure of the Eastern State IOA


other counties
Tchr Center
University
College of Education
dean
OFE
Teacher Center
schools
Cardon County District
TC
sup's off.
TC
elementary schools
TC
elementary schools
Hanburg County District
high schools

It should be noted that In Eastern State the major local educational authority resided at the county level; counties were generally highly populated and thus included a number of high schools and dozens of elementary schools. The largest counties such as Gannt and Martinville were actually sprawling suburban tracts with populations approaching 500,000. The teacher centers could obviously not provide comprehensive coverage across these districts and hence tended to be attached to a small cluster of cooperating schools. The network structure as a whole was essentially radial, coordinated, supported administratively and logisticaly by an office located in the university. The same was the case in Eastern Private. Any inter-district contacts occurred at functions initiated and organized by the university secretariat group.

Figure 1-4 Basic Connective Structure: Midwestern State IOA


State University
College of Education
dean
sec.
dist. admin
TC
individual teachers
Three Rivers Area
individual teachers
Arcadia Area
State College
TC
State College
TC
teachers
State College
TC
Other Areas
TC = teacher center
sec. = IOA state-wide secretariat

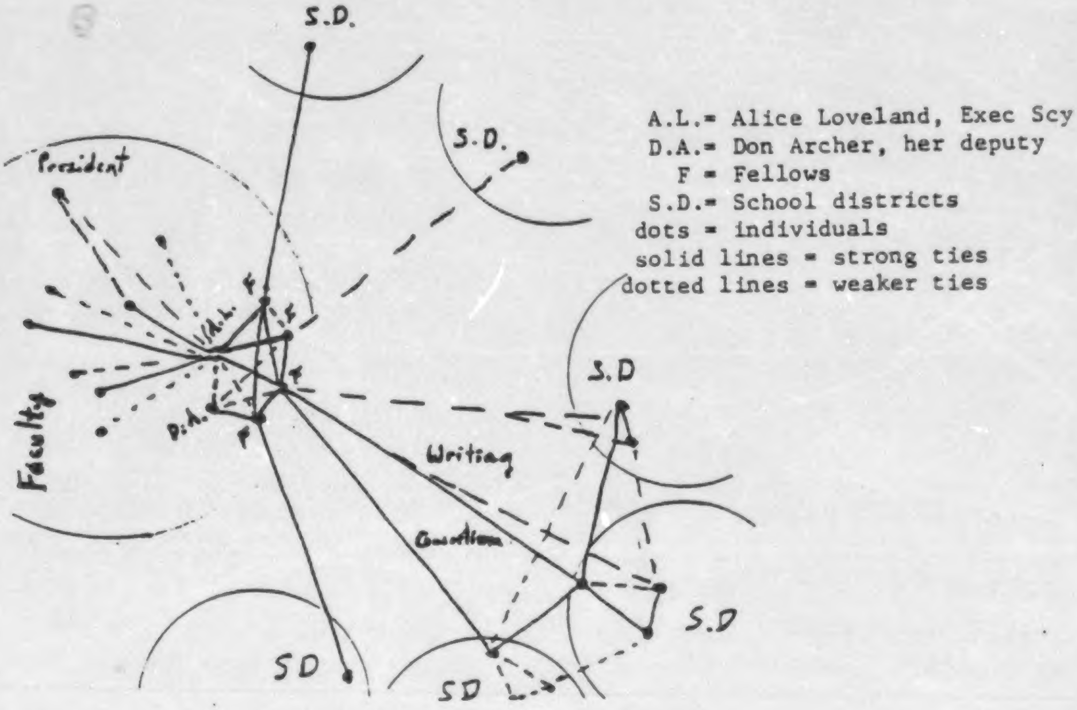
In Figure 1.4 representing the essential structure of the Midwestern network we find an additional complexity in that almost all the spokes of the wheel lead to other four-year public colleges scattered around the state. Each college developed its own pattern of relations with associated schools and school districts. This was not the case for the Three Rivers site, of course, where the University provided the seeding effort and consultative support but the teacher center became "orphaned," not located in the University and finding, initially, tepid support and inferior isolated quarters.

We have not attempted in these diagrams to include the various governance structures that apply in each case. All the teacher centers and the Council functioned with advisory or executive boards variously constituted and empowered. In all cases board membership was heavily school district oriented. For the Council the board was almost entirely superintendents; for Midwestern by deliberate design the majority of all boards was teachers.

Through various means we attempted to develop an understanding of the fine structure of connections which underly these cross inter-institutional patterns. We were especially interested to learn if informal patterns at the interpersonal level were reflective of formal organizational ties. We were not successful in collecting systematic sociometric data which could provide meaningful quantitative comparisons but analysis of logs combined with other obvious trends emerging from our interviews revealed configurations something like those we present in Figure 1.5., 1.6, and 1.7. These figures are intended to summarize what appeared to be the bulk of interactions of a substantive nature among active network members and participants, including the fieldsites most studied in each case.

Figure 1.5 illustrates the working relationships that existed at the Eastern Private site during the 1979-80 school year when the writing consortium reached its fullest flowering as the most visible and sustained outreach activity. The core group within which both loyalities and active involvements were most intense revolved around Alice Loveland at the University. Within the group there was a lot of mutual interaction. Direct field contacts most heavily involved the fellows and not Loveland but University connections, all important in providing resource persons for the many workshops and conferences were

Figure 1.5 Working Relationships Involving The Council Staff, The College, School Districts, and District Personnel


S.D.
S.D.
President
F
A.L.
F
F
D.A.
F
Faculty
S.D
Writing
Questions
S.D
SD
SD

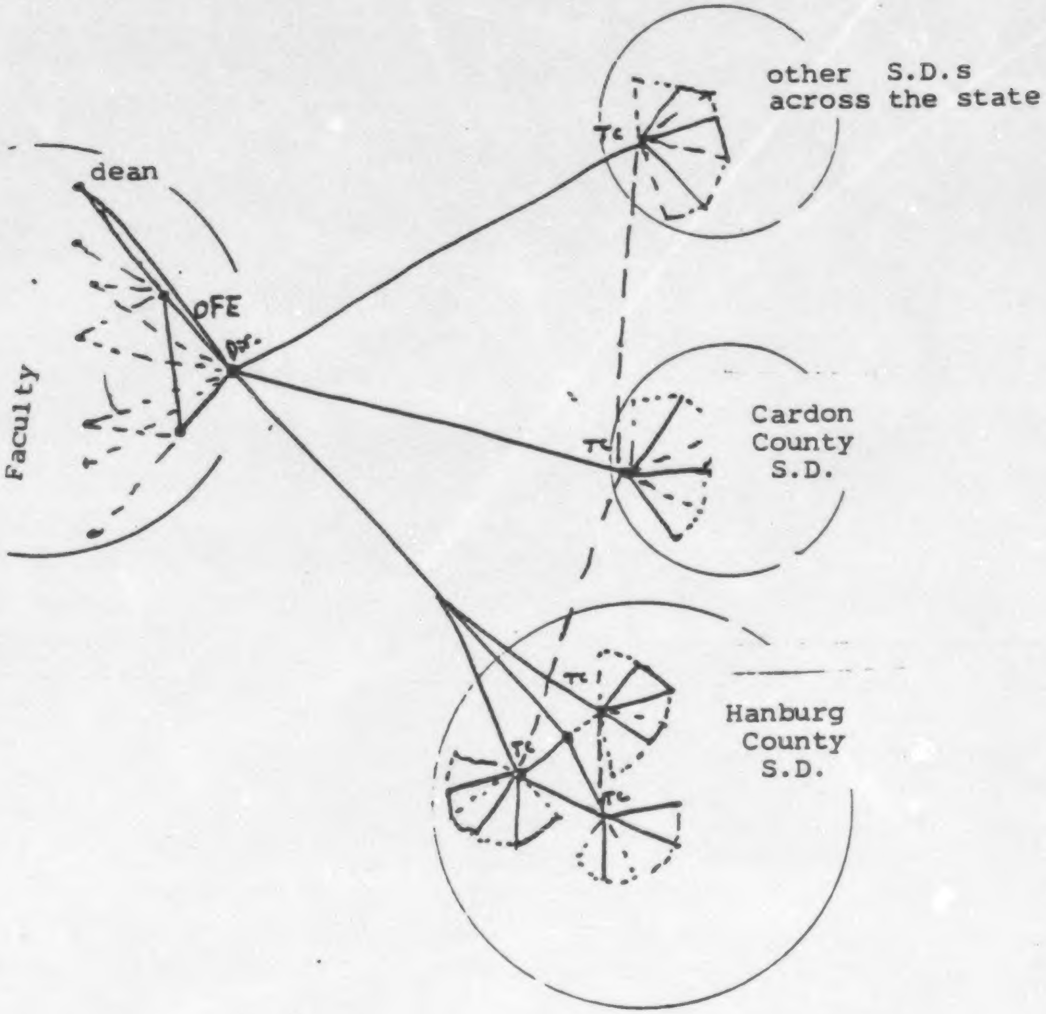
A.L.= Alice Loveland, Exec Scy
D.A.= Don Archer, her deputy
F = Fellows
S.D.= School districts
dots = individuals
solid lines = strong ties
dotted lines = weaker ties

heavily dependent on Loveland's strong relationships with other faculty and other experts around the county. Her assigned deputy, Archer, was heavily involved in providing logistic support and making arrangements but had relatively weaker ties with both the faculty and the graduate student fellows. Archer's field contacts were also more tenuous.

The radial structure of the Council as a network was, if anything, more pronounced when we looked at interpersonal connections. Despite frequent pronouncements and a clear desire to make the network a collective sharing enterprise in which the University would only play a facilitative role (nearly indentical to the espoused ideology at Midwest), there were few inter-district connections and not many more intra-district connections which were inspired by or rooted in activities of the Council. The major exception might have been the Writing Consortium (discussed in detail as a "serial" in Volume III). This spin-off network was the result of the inspiration and considerable efforts of one of the fellows, supported only modestly by other Council staff. A succession of Consortium meetings occurred over a three year period involving approximately six districts, two most intensively. Through these meetings, especially where attendance was sustained, inter-district mutual assistance ties of some strength developed which were no longer dependent on University involvement.

In the Eastern State case sketched in Figure 1.6 we see again the essentially radial pattern with further radial patterns developing out of each center. At the University end there is a strong director who has substantial direct contacts with teacher center coordinators and, in fact, has forged them into a network through frequent meetings and annual workshops. The director of OFE also has strong ties with two faculty members and the dean, and through his low key informal style manages to have good working relations with many other faculty in different departments. At the Hanburg county site where there are three

Figure 1.6 Working Relationships: Eastern State


dean
OFE
Faculty
TC
other S.D.s across the state
TC
Cardon County S.D.
TC
TC
TC
Hanburg County S.D.

OFE = Office of Field Experiences
TC = Teacher Center
S.D.= School District

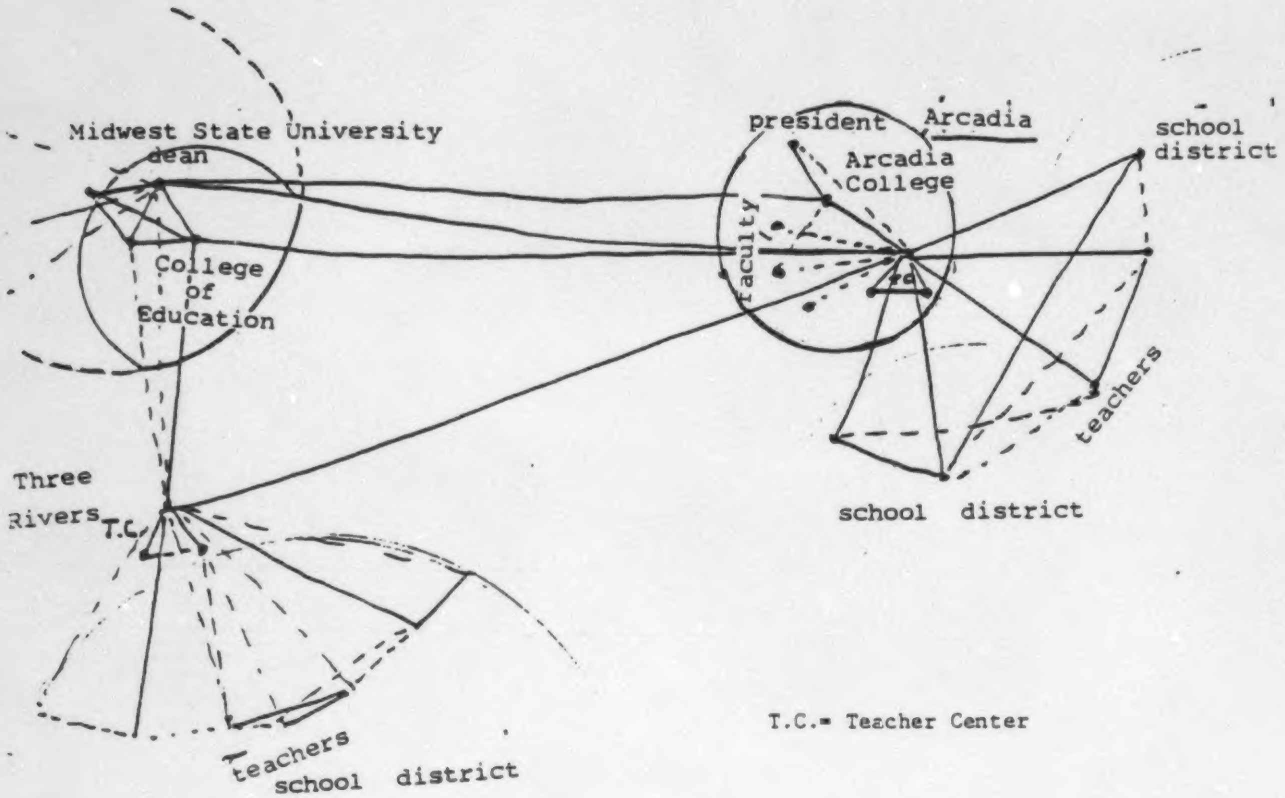
centers administratively reporting to one central staff person there also sppears to be a kind of sub-network. Each center operates primarily as an assignment and control point for pre-service practice teaching students from the University although they have increasingly been used as and accepted as legitimate but not exclusive loci for teacher in-service and ad hoc assistance. Thus the radial vs. the circle structure of this diagram may be overstated.

Turning now to the structure of working relationships within the Midwestern State network we find more substantial evidence of radial patterns combining with circles to form strongly interconnected structures. At the level of statewide contacts, given the geographic and resource constraints, there was considerable interchange involving not only the director-founder at State U. but also his deputy and the directors of a number of the centers. Log evidence revealed considerable interaction, for example, between the directors of the Arcadia and Three Rivers centers. Within the Arcadia center network, of course, interactions were most intense. Very strong relations existed between the director and a senior colleague, both of whom had had advanced training at State U. under the special program started by Saganne, the founder and dean. But the Arcadia center was most noteworthy for the very intense involvement achieved among teachers. Network ties at Three Rivers were generally more insecure and turbulent, especially with the district administration. Teacher contacts were again primarily radial but began to solidify when the continued existence of the center was threatened. Actually, at Three Rivers the proferred ideology was strongly teacher centered from the start but efforts to gain a sense of teacher ownership were only paying off as our study closed.

1.3.2 IOAs as Transactions

Tracing the connections among institutions and people reveals some important aspects of these interorganizational arrangements but tells us nothing of the substance or the reasons for the connections to form in the first place. It

Figure 1.7 Working Relationships: Midwestern State University IOA with Hybrid Structure Sometimes Involving Sattelite State Colleges


Midwest State University
dean
College of Education
president
Arcadia
Arcadia College
faculty
ed
school district
teachers
school district
Three Rivers T.C.
teachers
school district

T.C.= Teacher Center

is important to note that all these reltaionships, especially at the institutional level were voluntary, i.e., no party was compelled to enter them for any reason other than self-perceived self interest. Partly for this reason we felt that it was most appropriate to view each relationship as a bilateral transaction in which each party gave something and received something else in return which they viewed as having sufficient value to make continued association and giving on their part worthwhile. Thus we argue that each sustained relationship was founded in an implicit or explicit *bargain*. A great deal of what we found in these three cases can be understood rather well in such terms.

Bargains are distinguishable from other kinds of relations in terms of the symmetry of value transferred and in terms of asymmetry of meanings transferred. A bargain relationship is one in which each party gains something that they value at least enough to sustain the relationship but each receives from the other something quite different from what is sent. In these cases the university in each instance was providing educational services of one sort or another, in most cases with formal credits attached which could be translated by teachers into financial increments and sometimes into job mobility. The schools and school districts, on the other hand, provided field training sites and supervision for pre-service teachers, placement opportunities for graduates, and enrollments with their accompanying fees. These were the more obvious "chips" that were cashed in each bargain, but there were many other kinds of chips which occasionally became important at one stage or another in the development of a relationship. Among these on the university side were research findings, ideas, products, and other types of innovations that had potential classroom utility, space, facilities, special equipment, facilitation of peer and superior-subordinate interchange, facilitation of problem solving, career mobility (e.g., into graduate school and thence to administration, higher education, research, or better teaching opportunities), or personal intellectual insight and growth, and status enhancement. On the school side there were opportunities to advance one's understanding of public education and problems to improve one's teaching and research at the university, access to research and development sites, increased credibility as an expert on educational matters, access to various types of consulting opportunities, and remuneration therefrom. All these "chips" appeared occasionally in each of the cases.

Bargains were sometimes covert, with motives for interaction expressed on the surface in more idealistic terms such as the need to improve education or to improve the lot of the teacher, or to increase sharing, but the essential underlying nature of the bargain could be seen when things began to come apart or when persistent efforts at linking failed. Some persistent reasons for bargain failure which appeared in all three cases were as follows:

1. Resource depletion or exhaustion. Either party could run out of chips or not have enough left to make continuance of the relationship viable. As enrollments declined in the areas of all three case sites, the demand for teachers also fell, and hence the enrollment in pre-service teacher training. It also happened that when certain specific problem domains such as the Writing Consortium of The Council were explored extensively, both interest and capacity to provide fresh inputs declined.

2. Financial Constraints. It is generally true that when either party to a transaction wants a particular commodity enough they can ante up enough resources to make it worthwhile for the other party. Thus it is that money comes to have such important status as a bargain equalizer. What we can't trade for we can buy. Even though among these IOAs we see many examples of pure bartering, i.e., where goods, services, and knowledge are exchanged for other goods, services, and knowledge, some amount of equalization in the form of financial contributions seems to be necessary to sustain IOAs. Increasing financial pressures on all schools and colleges

throughout the period of study made stable bargains increasingly difficult to achieve. Here the role of third party financing is illuminated as especially problematic. Particularly in the case of the Midwest network there was temporary dependence on funding from a private foundation: $400,000 over a five year period. Funds were intended as in many federal "demonstration" programs as pump priming, peaking in the second and third years and falling off to nothing by the sixth year as local authorities pick up increasing proportions of the cost. This type of formula is almost impossible to achieve in the kind of fiscal environment obtaining in these years and the only center which seemed to be surmounting the problem (Arcadia) was one which invested heavily in stockpiling reusable materials while avoiding the assignment of funds to staff salaries. The Midwest network as a whole, as our study concluded, was relying heavily on expectations that either the federal government or the state government would come in to fill the gap when the foundation departed. In the same vein The Council in the last year studied was in the process of winning a grant from the National Institute of Education which would, in effect, help pull the staff through another year or two when support from the endowment of the Action Research Institute was beginning to look shaky. Quite evidently, however, support from third parties also entails its own type of bargain, a bargain in which the sponsor expects certain outcomes which may not really be within the power of the recipient to achieve (such as independent financial support from local sources).

3. The need fades. It may also be that one or the other party finds a decreasing need for the resources formerly supplied by the other party. Especially in turbulent times perceived priorities can change quickly especially when they are subject to changes in popular opinion and the constitution of school boards. It may happen that a district will develop its own in-service and problem-solving capacities to a point where they view outside assistance, even from large universities as either

superfluous or inferior. This happened in the case of Martinville County in Eastern State where the network actually had its roots. It also happened in at least one of the original school districts which had associated itself with The Council of Eastern Private. Likewise at the university end this may happen. At Eastern Private there was a perception in the late 1960's and early 1970's that The Council was no longer relevant because it represented elite and prosperous school districts which needed no help in contrast to the impoverished and problem-laden urban districts which surrounded the university.

4. Turbulence interrupts and disrupts. Generally bargains don't work without a degree of environmental/situational stability. Key personnel must stay put for a minimum time; resource availability must be reliable for a minimum time; needs, demands, and constraints must remain reasonably constant for a minimum period of time. In these terms all three of our networks generally fared well, but where leadership turned over rapidly as it did in the early days of Cardon County and Three Rivers and where leadership was intermittent as it was at The Council throughout the period of study the bargaining agents on one side or the other get fidgety.

5. The presence of competing resources. One distinct advantage of the Midwestern network, particularly illustrated at Arcadia, was the exclusive nature of the resource provided by the college. In Eastern State there were a number of competing sources which tended to dilute relationships, especially in the care of Arthur County where another university was looked to by many as a stronger and more proximate resource for the same services. For the more isolated rural county of Cardon, Eastern state was a more exclusive and hence more valued resource. In the case of Eastern Private, competing resources were ubiquitous, typically more proximate, and often obtainable more cheaply with fringe benefits of official sanction and course credit not offered by Eastern Private. We believe that this factor represneted a severe constraint on the expansion and enrichment of The Council revival in the late 1970's. In earlier

times The Council had been perceived as the sole source for many types of knowledge and services valued by school district administrators. By the 1970's Eastern Private was trading heavily on its reputation and its capacity to deliver the highest *quality* of knowledge resources available in the area. This type of appeal worked for some districts, not for others. It took a fairly strong district to recognize the validity of the claim and hence the special value of the resource. Presence or absence of competing resources is one of the strongest causal factors in determining the institutional success of IOAs.

6. Domain dissensus. Bargaining relationships depend to an extent on an assumption that each party controls separate territory and resource capacities which can only be accessed through bilateral negotiations. When one or the other party lays claims to certain capacities and responsibilities which the other is offering to provide the result can be confusion and conflict. In Eastern State and in Midwest, local districts often were charged with the responsibility of providing their own in-service, often under the presumed leadership of principals and central district staff personnel. When the universities entered the scene with their teacher centers there was sometimes conflict, especially in the early stages, when certain district personnel felt their turf was being invaded. At Eastern State a similar turf problem arose on the university side when certain faculty felt their prerogative and responsibility to supervise student teachers in the field was being undermined by the teacher centers who were proposing to use district personnel for the same function. Eastern Private may have had some advantage in regard to this issue since it was rarely seen as invading terrain of others but rather providing opportunities of a low risk and low commitment nature which were essentially an add-on to what was provided internally or from other sources.

7. Bargain ratios change consistently or precipitously. The chips that are actually used in bargains change continuously by small amounts as one or another party antes up more or gets more out of a particular encounter. These fluctuations are generally unimportant provided the over-all balance is maintained. One or another workshop may flop, for example, without threatening the existence of the IOA and one or another school may send poorly selected and poorly motivated candidates for training or participation in various events. However, if these changes become consistent trends or if they are very large and sudden they will seriously affect the stability of the bargain. Such a case is represented in the decline of The Council in the early 1970's when participating districts received fewer and fewer benefits for the same financial investment and in dissatisfaction in The Council in the middle 1970's when many members felt they were coming to be used as subjects in a large research endeavor from which they would derive no clear benefits.

An example of precipitous change was the abortive decision of the Three Rivers administration to terminate funding for their teacher center. In that case the decision prompted the activation of counter-forces among teachers and others which led to restoration of 80 percent of the Center budget.

8. The chips can change. Each of these cases and each of the minicases represented in the serials and the centers is a story which developed over time. With time and with growth or decline some of the chips may change on one side or the other. A typical change for example, is from pre-service support to in-service support, and in the most developed and sophisticated sites from in-service to resource linking, peer networking, and problem-solving. Sometimes these changes come about as a natural progression or evolution in which both parties concur, but sometimes shifts are made too quickly or without the consent or understanding of the other party. This appears to be what happened in Cardon County in Eastern State when a new coordinator

stepped out of her traditionally circumscribed role of pre-service supervision arrangement to begin a campaign to promote "bridging" between elementary and middle school adjustment by pupils.

1.3.3 IOAs as Organic Systems

While it is important to understand IOAs as bargains between established institutions, it is also important to see them as emergent social systems in their own right, even if they are much weaker and probably much more temporary and limited in scope and capability than those they bind together. In each of these cases network building efforts led not only to the creation of many new connections and many types of bargains but also to the creation of new organizational entities, "offices," "centers," "boards," "consortia" and so forth. For the most part these entities were not free standing but rather dependencies or subunits of larger institutions. Secretariat offices representing the network came into existence within the prime university member at each site. The strongest such unit was the one which had developed from The Council in its heyday in the 1950's, a professor-director supported by three executive secretaries with professorial appointments and a large number of graduate student "fellows" working under them. There was also at that time a data processing support group and a publications operation of fairly impressive dimensions, all supported largely from membership fees from many hundreds of districts in the local, state, and national networks which were integral parts of the system.

What does it take to make a viable system? First of all it takes connected elements which obviously obtains in all these cases. Then it takes a degree of cohesion and stability among these elements and their relations. This was achieved in varying degrees in each case, generally as initial bargaining relationships were struck between the parent institutions. Particularly where "centers" were established as part of the bargain, new organizational forms came into being with designated leadership and staff, specified objectives, tasks and functions. Each such unit then could be described in terms of its own "input," "throughput," and "output." Yet as linking systems they may have special difficulties or challenges since they receive input and provide output both for the university and the participating school districts. One image of IOAs is that they are merely pass-through systems with very little throughput capacity or purpose other than "facilitating" or "initiating" linkage among the other parties. This conception of IOAs does not appear to be particularly viable. Most coordinators, directors, and other staff persons specifically assigned to IOAs found themselves doing much more than merely "arranging," sometimes developing materials, sometimes developing new courses and conferences, making presentations themselves, doing research, and involving themselves in sundry complex duties. Most noteworthy is the fact that the staff of the most successful center at Arcadia within the Midwestern network engaged heavily in making presentations, designing and running in-service programs along with all their other duties of collecting materials, managing the center, arranging for credits, and finding new clients.

At several sites a major problem was defining the limits of responsibility so that the task could be managed without overload and without either confusing, disappointing, or unduly disrupting the major linked institutions. The Three Rivers case probably best exemplifies the difficulty of grappling with such issues. This center suffered from very weak sponsorship from the school district even though the model for the center pushed by the Midwestern State University people was a district-based center. A succession of early directors of this center struggled to operationalize a strongly held ideology of teacher ownership and sharing of craft knowledge but were overwhelmed by their many responsibilities and pressures to provide various services and to be perceived as obviously useful to both the teachers and the administrators of the district. In the end the Center was coopted into being a sign-up station for university courses and credits, a function well understood and valued by teachers, administrators, and the university, but far away from the staff's original ambition of personal growth and collective problem-solving assistance.

One lesson from this experience is that it takes more than good ideas and zeal to make a system go. It takes operational procedures that are well understood, repeatable, and reasonably efficient. Many of the loftier ideals of network founders and leaders in all three cases were not operationalized in a way that made them viable. This was true of the fellows program of the revived Council which languished and essentially disappeared after early struggles to provide problem-solving process assistance within various school districts. It was also true of the first efforts in Three Rivers and of the early "bridging" effort in Cardon County in Eastern State. It is clear that successful systems depend on various repeatable processes or routines or modus operandi. Most of the known ones are used to support and continue established systems such as universities and schools, but what does it take to establish new and innovative systems such as these linking networks? This is the real challenge of our age. It seems clear that such routines can emerge in some sort of evolutionary process as they did at Arcadia and in some instances but less reliably at all other sites. However, we are not yet at the point where we can specify the formula for such routines.

1.3.4 The Rhythms of Time

As noted above, some of the most intriguing patterns observed in this study seemed to emerge out of some evolutionary process. It seems obvious that there are many aspects of IOAs which can only be understood from a developmental perspective. We have gone to some lengths to trace each of these cases back to its origins and even to the events and elements out of which it sprang. At Eastern Private the story really began in the 1920's when the founder got his degree and an idea for quantitative assessment and comparison of school districts. Through the 1920's and 1930's he developed a very significant program of studies at Eastern Private, many of them very large scale surveys of school districts of various types and sizes. This developing story or series of stories was far beyond the reach of this study although we were able to capture a few relevant facts which suggested the depth and complexity of the pre-history of The Council. Twenty years is a long time. We suspect that there were network-like arrangements set up within those years. Most certainly there were informal networks such as the "school survey movement" in which The Council's founder was a key figure. Such movements had their own life cycles. They had their inspiration and their origin, their heyday and their decline, eventually their demise, and from the ashes, apparently The Council grew.

If we can accept the notion that such networks as these are truly organic systems as suggested in the previous section, then it is but one small step further to suggest that each has its own life cycle like any other living thing. At the very least the metaphor is instructive. Miles (1964) coined the term "temporary system" to describe a range of social arrangements which seemed to have an organic social existence, however short. In this category he included seminars, conferences, projects, and the like, assemblages of people who had crucial and intensive interactions around a common goal for a brief time and then went their separate ways. IOAs are not necessarily "temporary systems," certainly not when they can last 40 years with more in prospect, but the tracing of their histories suggests a type of development in which there is a definable birth, a growth, typically a leveling off, and/or a decline which may then be followed by more growth of stabilization or perhaps transformation into something else.

For analytical purposes we devide the life cycle of IOAs into five stages: germination, growth, consolidation, recession, and termination. Some preliminary thoughts on each of these stages and how they relate to one another follow.

1. Germination. The beginnings of IOAs are as interesting and as complex as any other stage. There is usually a pre-

history of meetings, writings, proposals that were never funded or operationalized, agreements which were tentative, definitions, explorations of interest, need, resource availability, and capacity. In the case of the original Council the beginning was a very successful conference at which participants agreed they must continue to meet. On the other hand, there had been an elaborated pre-history, a prepared and willing leader, and a capacity to act. Typically, germination requires a dynamic leader, a viable conception of a collaborative activity and membership, resource readiness, a set of potential participants with commonly perceived needs, and a catalytic event such as a conference or the funding of a proposal.

2. Growth. Next comes the initial building stage wherein staff are hired or reassigned, space acquired or occupied, material resources assembled, and membership recruited. This is perhaps the most exciting and chaotic period. Everybody seems to be doing everything. There are usually large quantities of good will and energy on the part of those most directly involved and there is a sense of mission and a sense that all things are possible. Growth involves both expansion and differentiation; the labor is divided and redivided; leadership is established; contacts are made with clients; plans are implemented.

3. Consolidation. After the early surge of activity there comes a time when new roles and activities need to be solidified--put on a more permanent footing. Differentiated elements need to be integrated. Activities which are shaky or awkward or incomplete or ineffective need to be modified, strengthened, adapted, or eliminated. Patterns of activity which need to be repeated such as monthly meetings and reports and periodic newsletters need to be routinized.

4. Recession. For temporary systems there comes the time when growth and consolidation give way to shrinkage, strategic withdrawal, retrenchment, or perhaps division. It is generally the case that ambitions and hopes outreach capacities, particularly in the long run. It is also often the case that early leaders

will have loftier ambitions and greater inspirational powers than those who replace them. These are some of the factors that make a period of recession likely.

5. Termination. Like old soldiers, many types of institutions "never die; they just fade away." But even "fading away" is a distinct process with its own special symptoms. Organizations which have fewer and fewer meetings with smaller and smaller attendance with briefer and briefer agendas are probably dying, but some are capable of a very long twilight existence or hibernation which is operationally akin to death but not quite the same. Even institutional entities which have been pronounced dead can have a memoried existence, and if the memories are potent enough they can act as the seed for the germination of new institutions.

When an institution has a prolonged life the staging process is likely to be much more complex in that periods of growth and consolidation are likely to be succeeded by additional periods of growth and consolidation, with periods of recession also interspersed. Such undulating patterns were certainly noticable in these IOAs, particularly where their histories had been traced over an extended period of time. In the case of Eastern Private, The Council in the mid-1970s showed almost every symptom of the termination stage except the death rattle but managed to come back to life, albeit with some metamorphosis.

For educational institutions the rhythm of time is dominated by the rhythm of the school year. Each school year, in many respects, has its own predictable germination, growth, consolidation, recession, and termination, starting in early September and ending in mid or late June. Whatever else happens in educational settings tends to get sucked into this inevitable cycle and affected by it for better or for worse. Each of these IOAs is noteworthy for having survived many such cycles, but the fact that each school year is seen as a fresh start has a tendency to bring last year's "innovations" under skeptical scrutiny, while this year's innovations receive favored treatment.

Other time dynamics of the larger society can also greatly affect the life cycles of weak institutions like IOAs. Typically elections and administrations come in four year cycles. Also cyclical in a less predictable way are economic recessions and booms which inevitably affect what goes on in education, especially whatever is dependent on fiscal resources.

In our section on historical analysis we expect to take a close look at these time rhythms and try to make sense of the IOA phenemona in these terms. Obviously such an understanding would allow us to get a firmer grip on prediction, but the implications should be broader than that. We suspect that many IOA efforts fail to achieve an optimal impact because they are the victim of adversity at one or another of these stages. Observing and understanding the life cycles of many comparable efforts should suggest ways in which these efforts can be redirected or supported or supplemented at crucial moments for optimal effect on educational improvement.

1.4 THE STUDY

The preceding section on "patterns" represents our current thinking on IOAs and how they can best be understood. It combines theoretical notions with observations from our case study material to provide a view which we did not have when the project was conceived, proposed, and initially undertaken Therefore, at this point we will take a step back to review very briefly what the study was all about.

1.4.1 Conceptualization

The precipitating stimulus for this project was a "Request for Proposal" from the National Institute of Education in 1979 which solicited studies of networks involving more than two institutions and institutions of different types, all engaged in some form of practice improvement involving the dissemination and utilization of practice-relevant knowledge. We were attracted to the idea of proposing school-university collaborative networks because of prior theorizing regarding the role of the university in societal problem-solving in general (see again Section 1.1). We further sought to study school-university connections as "linkage" phenomena, stemming from prior work by Havelock and others to develop this concept as a framework for understanding the dissemination and utilization of knowledge. We further expanded our conceptual domain to include notions of bargaining the domain consensus among others as will be discussed in somewhat greater detail in Chapter Two which follows.

We felt that it was important to provide as complete a descriptive overview of each IOA as possible following a common framework and addressing a common set of research questions. Four major classes of research questions which we attempted to address were as follows:

1. What was the nature of the arrangement, including objectives, structures, typical operations and activities, and roles.

2. What was the environmental context, including quality of relations to each supporting institution, degree of autonomy of the IOA, perceptions by supporting institutions, effects of demography, economics, politics, and geography, and the historical context.

3. What were the prominent outcomes attributable to each IOA, including outcomes on staff and delegates of the IOA, as well as its clients, members, and supporters and their respective institutions, including changes in power, status, knowledge, linkage, practice improvements, fiscal changes, and structural/administrative changes.

4. What are the relative merits of different theoretical models in explaining empirically discovered configurations and apparent cause-effect connections?

1.4.2 Method

The primary data collection mode was extended and repeated interviewing in the field of key persons who nominated one another as either good informants or occupying key positions currently or historically. Interview schedules were wide ranging and tailored both to the area of knowledge of the respondent and to the degree to which redundant information was already in our possession. Typed field notes from these interviews totalled nearly 1,000 pages.

Interview materials was substantially supplemented by observations of typical activities and governance meetings at each site, log books maintained by a key informant at each site for a minimum of two weeks, and a bulk of written documentation including proposals, meeting minutes,newsletters, annual reports, and sundry other materials supplied freely by our respondents. The result was a founded and extensive picture of what happened at each site over a period of two years with further elaborations of that understanding stretching back to what appeared to be logical and accessible starting points. The methodology is more fully described in Chapter Three of this volume.

1.4.3 The Descriptive Findings

The findings of the study are spelled out in a case-by-case parallel presentation in the preceding three volumes. An extended summary of each case in narrative form was supplied in Section 1.2 of this chapter. Even more briefly we can summarize the descriptive findings as follows.

We have discovered three operational school-university collaboratives which are durable, more or less sustainable without third party support, involve many hundreds of school personnel, mostly teachers, and have a variety of outcomes, mostly positive. Of these by far the oldest was connected to an Eastern Private University of great prestige. In its original form this network serviced as a national model for networking connections between colleges and school districts for two decades. It provided a system for extensive quantitative comparison of school districts as well as a mechanism for sharing and utilizing that knowledge for practice and administrative improvement. However with the retirement of its early leaders and other environmental changes, this network ceased to function in this manner after the 1960s. After a period of minimal activity it was revived under entirely new leadership with a different teacher-centered ideology in the late 1970s. The revived network included many of the original school district members but focussed primarily on providing numerous workshops led by experts, usually from the university. The revived network seems to have had a scattering of important outcomes in the form of local innovative efforts inspired by workshop presentations. In one case a subnetwork developed among a handful of districts around efforts to improve the teaching of writing.

The second network case revolves around the efforts of a large college of education in an Eastern State public university to improve and extend its services and supervision of student teachers placed throughout the state. These efforts began in the middle 1960s and were substantially abetted in the late

1960's by a large federal grant which called for the creation of "teacher centers" in various parts of the state. Massive growth was accompanied by increasing conflict within the college of education, leading to the resignation of the person who had been the driving force behind the effort. After a period of uncertain leadership, declining resources and declining district participation,the effort came under the highly pro-active but low-key and competent leadership of a new director. The current configuration includes nine teacher centers or professional development centers serving something less than a third of the schools in five counties of the state, four of them densely populated and including a large portion of the state's population. Over these years there has been a shift toward greater in-service activity with associated course credit and there have been a number of examples of collective problem-solving within districts instigated generally by the full-time center coordinators. Impact appears to be moderate but positive at most sites, less significant within the college of education. Inter-district sharing is not formalized but is encouraged through monthly coordinator meetings and semi-annual retreat-type workshops.

The third network was organized in a sparsely populated midwest prairie state with high per capita wealth but a history of rather low financial support for public education, this despite an avowed high valuing of public education. The prime mover was a dynamic dean who came from another state originally to head up an experimental program for staff development and renewal. As a result of this program the entire state was seeded with enthusiastic advocates of new teacher-centered and personal growth-centered approaches to staff development. The dean used these seeds to develop a proposal which was funded to the tune of $400,000 over a five year period to establish a state-wide network of teacher centers involving the collaboration of several smaller four-year teacher training colleges dispersed about the state. Four such centers were created in 1977 and five more added by the 1979-80 school year. Each center was supported on a matching funds and resources basis between the colleges and the school districts. Additional third party support state-wide came from a foundation grant with funds distributed in progressively declining amounts over a five year period. Each center could spend these funds as it saw fit within rather broad limitations. The plan appeared to have the strongest impact atone site where a germinal center already existed and where a strong two man team pushed for stronger and stronger college commitment and creatively organized a range of services which teachers found extremely attractive and relevant to their needs. By investing third party funds heavily in materials, this center built up a strong resource base which would long outlive the grant and would not make the continued operation of the center dependent in any way on third party funding.

In other parts of the state the generally stringent atmosphere of school budget decision making made continued existence of the network without third party funding problematic. A second center which was studied intensively revealed a troubled early history due to high leadership turnover and orphaned institutional status, being firmly and centrally lodged neither in the university nor in its reluctant "host" school district. Persistent efforts by a new generation of leadership supplied by the University began to pay off in increasing teacher participation and a sense of teacher ownership by the second and third years of operation. The attractive power of this center consistend largely in being a conduit for course registration and credit from the university.

Each of these cases is unique in many respects--the unique consequence of a unique set of conditions in a particular place and time. Yet the lessons for others in other places and times are many. They are above all lessons in what is possible with limited resources and limited initial support. The lessons are probably best learned from reading the cases one by one, so that the ways in which elements converge can be observed and the ways in which the networks as systems emerge from and interact with their environments. This is why the descriptive narratives are so important.

When we look across the cases, on the other hand, we are confronted with a bewildering array of quasi-comparable descriptive facts. We are aided by the fact that each case conformed fairly well to a common framework, but with only three major case comparisons (augmented by several sub-cases of centers and serials) we are hardly entering a statistical realm. In several of the chapters which follow we attempt to array some of the more important descriptive comparisons, but generally conclusions must be highly tentative and speculative.

PART TWO: BACKGROUND AND SCOPE OF THE STUDY

2.1. STATEMENT OF THE PROBLEM

Studies of the role of the university as a "knowledge builder" and "knowledge center" abound. These are, to be sure, the traditional roles invested in institutions of higher education. Somewhat more recently, there has been interest in tracing the flow of knowledge and expertise produced by the university to its ultimate targets in the world of practice.

This concern for the linkage between universities and local schools has not abated. In fact, pressure has grown on universities to enlarge their service or "outreach" function, and to direct it more operationally toward educational practice improvement. In many cases, the institutional response of colleges of education has been that of intensifying the in-service teaching function and of providing a more formalized process of delivering consultant services to school systems requesting them. The connections made, however, have been comparatively weak, poorly elaborated and not well supported from within. There has emerged a subtle and often implicit differentiation of roles, in which the prestigious private and state institutions attend to post-graduate training and non-mission oriented research, and the local state and community colleges busy themselves with pre-service training of practitioners and, with their remaining resources, remain on call to local school districts requesting specific forms of expertise.

Correspondingly, when the federal government in recent years has attempted to support the improvement of educational practice in schools, it has largely ignored the potential role of universities, relying instead on state or local educational agencies, on semi-public agencies such as regional laboratories or on parallel mechanisms such as the National Diffusion Network.

A less explored avenue of inquiry has been the instances in which universities and local school systems establish formal interorganizational arrangements to improve educational practices.

When these relationships are non-casual, continuous and directed at instrumental outcomes, there should be a measurable impact within cooperating schools. We would also hope that such interorganizational arrangements would affect participating universities, either in their instructional programs or in their capacity to provide sound and useful knowledge about educational settings.

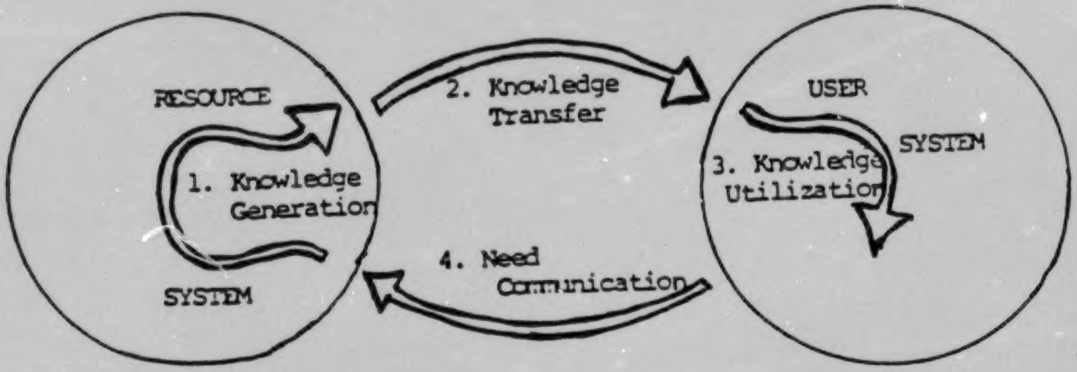
In addition, much more attention needs to be paid to describing the types of knowledge transferred between universities and schools as well as to analyzing the direction of the transfer. How is such knowledge produced, communicated, and utilized? Are there mechanisms for bridging the gap between those who operate from a theoretical or explanatory model and those who use a utilitarian or functional model of educational practice? Initial work on knowledge utilization theory suggests that knowledge transfer in education is far more complex and far less manageable in the ways in which it is politically and socially mediated between and within collaborating institutions than is the case in such areas as agriculture or engineering.

2.2. Conceptual Schema

2.2.1. Knowledge Transfer Theory

Conceptually, the transfer of knowledge between resource systems and user systems has been shown as a problem-solving paradigm (Havelock, 1969), in which knowledge is generated in a university or specialized laboratory and transferred via technical advisors or "change agents" to individual users or user "systems." Some of the early empirical studies of knowledge utilization (Rittenhouse, 1970; Sieber, Metzger and Louis, 1972) have mapped the movements of such agents--variously called "linkers" or "boundary-spanners"--between university-based resource systems and local practitioners. Presumably, the user system and resource system are continuously linked so that the needs, concerns and reactions of the former can be communicated (fed forward or fed back) to the latter. In a highly simplified form, the paradigm looks like Figure 2-1.

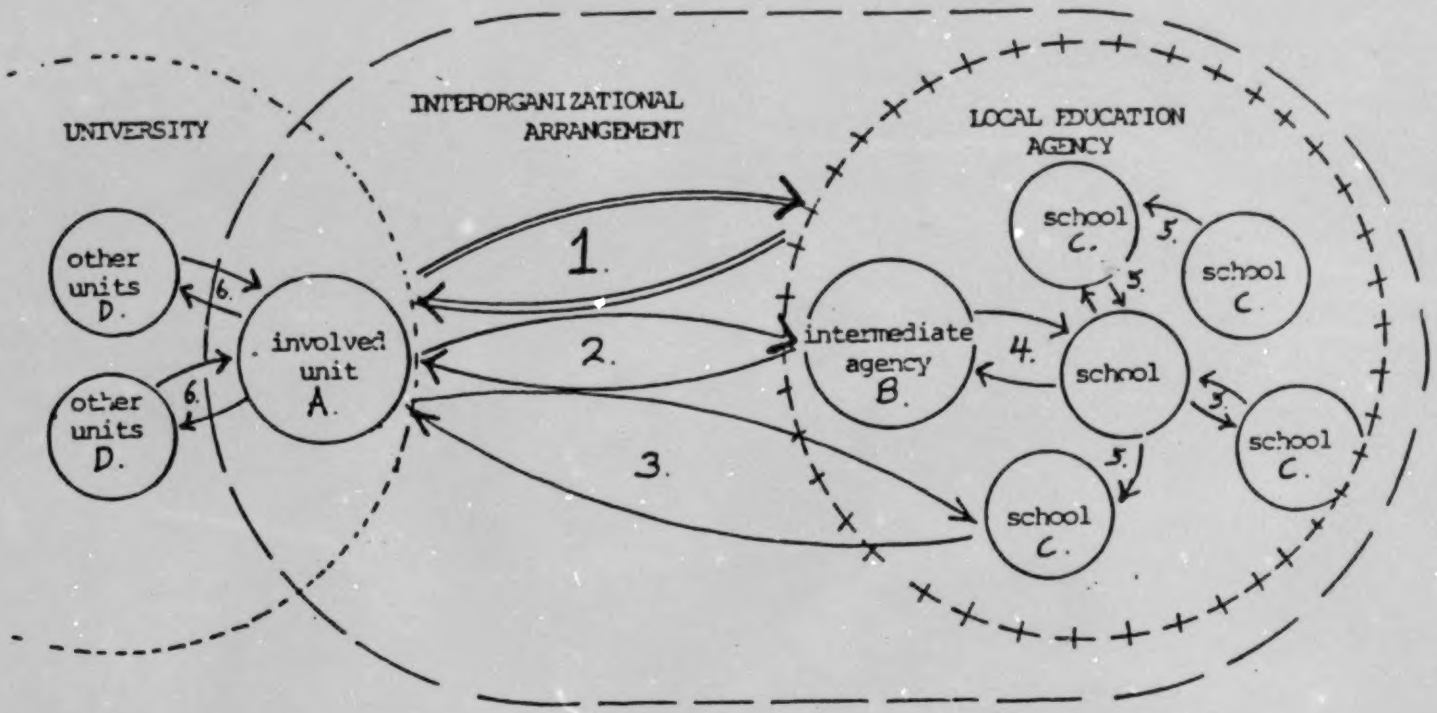
Figure 2-1 Havelock's Linkage Paradigm



It should be emphasized, however, that very few real-world knowledge transfer situations involve only one resource system and one user. It is also likely that the resource-user dichotomy breaks down if one looks closely at the arrangements between any two collaborating institutions. For example, a local school organization might be a user of resources generated by a university, but at the same time might itself generate teacher-based or administrator-based knowledge which the university would use to improve instruction or to stimulate empirical research. This calls for an enlargement of the linkage paradigm. Figure 2-2 on the following page presents such an elaboration.

As the figure indicates, there are at least six distinct linkage situations which potentially exist within this configuration. The relative strength of each probably determines the ultimate character of the arrangement. The first is that between the university-based participating unit (A) and the other members of the arrangement collectively (surrounded by crosses). The second is between the university unit and whatever agency (e.g., teachers' center, superintendent's office) is acting as coordinator or gatekeeper for school participants (A-B). A third is between the university and schools directly (A-C). A fourth is between the intermediary unit, serving as broker or knowledge linker, and the schools (B-C). A fifth is

Figure 2-2 Interorganizational Knowledge Transfer Paradigm


UNIVERSITY
INTERORGANIZATIONAL ARRANGEMENT
LOCAL EDUCATION AGENCY
other units D.
other units D.
6.
6.
involved unit A.
1.
2.
3.
intermediate agency B.
4.
school
school C.
school C
school C.
school C.
5.
5.
5.
5.

between the various schools themselves, and a sixth type of linkage involves flows and exchanges of knowledge between the participating unit at the university and the various faculties and departments.

2.2.2. Interorganizational Theory

A "knowledge flow" approach to analysis tells only part of the story. We also need to look to organizational theories to account for some of the mechamisms underlying those exchanges. Additionally, concepts from interorganizational research are useful, e.g., organizational set (Even, 1966), network (Benson, 1975) or pattern aggregate (Warren, 1967). Such a perspective is consonant with a general systems or cybernetic approach to organizations, which assumes that organizations are not bounded, self-sufficient entities but rather depend for their structure, resources, and operations on transactional relationships with other organizations in the surrounding environment (Simpson and Gulley, 1962; Aiken and Hage, 1968).

Unfortunately, the available body of literature is thin when we search for empirical and conceptual studies of formal arrangements for the exchange of resources between educational organizations. The bulk of available work on formal organizational properties has been restricted to single units (Stinchcombe, 1965; Burns, 1967; Perrow, 1972). Interorganizational studies, on the other hand, have shied away from formal relations among organizations. The majority of interorganizational studies track social interactions among individuals nested in proximate or resource-providing organizations rather than analyze the formal institutional arrangements which drive and constrain these interactions.

Fortunately, others have developed concepts to describe relations among organizations that are not centered on any one unit but rather focus on the interorganizational pattern itself as the unit of analysis. Warren (1967), for example, uses the notion of "interorganizational network" to convey the image of a "pattern aggregate" of interactions among organizations. Today there is a small but growing body of literature dealing with interorganizational networks in non-educational settings ranging from industry and health organizations to the National Collegiate Athletic Association (Litwak and Hylton, 1961; Aiken and Hage, 1970; Van de Van, 1979; Stern, 1979; Schmidt and Kochan, 1977; Hoagland and Sutton, 1978; Klongan, 1976).

The characterization of the linkages among the participating organizational units in an interorganizational arrangement provides another connection with a knowledge transfer paradigm. Transactions implemented by boundary personnel are influenced by the nature, multiplexity, intensity and frequency of ties and linkages among the organizational units.

Two additional ways to view the linkages among organizational arrangements are the degree of system coupling and the multiplexity of ties (Kadushin, 1979). Multiplexity of ties refers to the number of structural linkages among organizations while degree of system coupling centers on the intensity of structural connections (Weick, 1976). On the interorganizational level, there is evidence (Stern, 1979) that looseness of coupling allows subsystems a chance to respond to local conditions without threatening the stability of the arrangement as a whole. Other (Aldrich, 1977; Kadushin, 1979) argue that single-purpose ties in interorganizational settings are weaker than those which serve multiple purposes, and that the greater the number of different flows between members of a network, the more stable the network.

2.2.3. Exchange Theory and Power-dependency Theory

From an organizational perspective, we can use two conceptual frameworks to study and account for the processes by which a college of education, intermediate unit (e.g., a teachers' center or coordinating council) and local school system produce, communicate and utilize practice-relevant knowledge. Using the first framework, we would look at this interorganizational arrangement as a series of transactions or exchanges.

In keeping with much of the interorganizational literature, organizations are treated as collective actors who seek out exchange relations which involve the least cost to the organization in terms of loss of autonomy and power. In other words, the ways in which resources are exchanged correspond to a bargaining or negotiation process (Elmore, 1978; Adams, 1979).

Secondly, when organizations bargain, they seek to improve their negotiating position so as to obtain as many and, if possible, more resources than they give away. The bargaining position is enhanced by two interlocking factors: the power or influence which one organization or its members may exert on the other and the value of the resources to the other party.

2.3. PRINCIPAL RESEARCH QUESTIONS

Three types of research questions were explored in the case studies. On a descriptive level, it was important to study the nature of the interorganizational arrangement, including the historical context, the environmental context, the characteristics of staff involved in the enterprise, the relationships between participating organizations and the activities sponsored or administered within the arrangement. At a more analytical level, we were interested in the outcomes of the arrangement and, looking across different arrangements, in the ways in which different types of arrangements were associated with different outcomes. It was also important to identify the various barriers and facilitators to successful outcomes. Finally, there was a concern to determine how the flow of knowledge and other resources affect the outcomes of the arrangement.

At a more theoretical level, it was essential to determine whether and how transactions between members would approximate the problem-solving process central to the linkage model. It was important to test the organization-theoretic assumptions that numbers, strength and multiplexity of links would result in more durable and significant outcomes. Similarly, there were, in fact, measurable instances of bargaining and exchange? Were these processes a function of the relative power of each party to the arrangement? Do such interorganizational processes as exchange-bargaining and power-dependency affect the type, use and validation of knowledge transferred between participating units?

Finally, there was an overarching question: to what extent were outcomes at the level of the schools or participating university different from the benefits likely to accrue to each party if there had been no formal interorganizational arrangement?

PART THREE: METHODOLOGY

3.1. OVERVIEW

A comparative case history approach was used in this study. Each of the three cases (Eastern Private, Eastern State and Midwestern State) followed a common analytic framework to seek out answers to the principal research questions. Each site was treated as a "case" and the brunt of the data collection effort went into getting indepth, contextually grounded accounts of how colleges of education and local schools came to create interorganizational arrangements and how those arrangements might otherwise not have occurred as rapidly or efficiently. The general research strategy called for non-participant observation, multiple interviewing and the collection of archival data in order to get a set of reliable, plausible and convergent accounts and explanations.

3.2. SAMPLING

3.2.1. Selection of Sites

After a review of the several forms which such collaborative arrangements took throughout the country, three sites were selected for intensive case study analysis. The sites varied on several dimensions. The Eastern Private University site involved a large number of school districts and had a 40-year history of university-school collaboration.

The Midwestern State University site was in its third year and represented a rapidly expanded, activist arrangement. The Eastern State University site, of intermediate age, represented the efforts of a large public university to reach out to urban and suburban schools in its state. The three sites also spanned a continuum between a "corporate structure" or interorganizational arrangements (predominance of vertical ties from the university to local schools) and a "federate structure" (prevalence of horizontal ties among participating units).

3.2.2. Subsampling

Within each case, the analysis of the arrangement as a whole was reinforced by the study of two sub-units. At the Eastern State and Midwestern State sites, analysis focussed on two teacher centers linked to the university and to a set of local schools. In the Eastern Private case, major collaborative projects were selected as the sub-units of analysis.

At a still more micro-analytic level, each case analysis comprised a series of mini-case studies of typical or significant institutional events. Called "serials," each described the life history of either a substantive event (the organization of a collaborative research project, the introduction of a new practice) or an organizational event (the addition of a new school district to the arrangement, a self-study retreat session). Events were tracked from their origins to their outcomes, and several "trails" were pursued: a money trail, an authorization trail, a social network trail, a knowledge transfer trail, etc. This technique produced a set of "miniatures" that lay bare the anatomy of the arrangements and the mechanisms driving and constraining its operations.

3.3. DATA COLLECTION

The data collection effort is shown on Table 3-1. Data were collected over a 12-month period through a series of site visits, totaling 16-22 days. The modal data collection device was retrospective interviewing with key informants in each of the participating organizations. Theoretical sampling procedures were also used so as to include interviews with non-users, marginal actors, avowed critics of the arrangements, etc. Interview notes were then dictated and transcribed.

On-site observations were also carried out. Field researchers observed training events, key meetings and routine operations. Visits were often timed to coincide with important activity at the site.

A wide range of documents was collected and analyzed. Many of these were generated at the site itself: reports to funding agencies, proposals, evaluations, newsletters, memos, minutes of meetings. Other documents were initiated by researchers. These included the following: weekly activity logs filled out by key role incumbents (the university dean or department head, the teacher center coordinator, permanent staff and other persons spanning units in the arrangement); reports of communications relationships using standard forms on which key actors registered at two periods in time the frequency, mode and substance of their communications with other members of the arrangement; reports written periodically by a person at the site identified as an on-site consultant, who was paid an honorarium for periodic updates on site activity, notably in relation to the substantive and organizational serials; predictions of the future configuration, level of activity and degree of institutionalization of the arrangement over the following 12 months. These predictions were made by two persons at the site and served as a validity check on the interpretation of the data.

Table 3-1 Summary of Data Collection Effort

Effort / Site	Total No. Days on Site	Number of Interviews: College	Intermediate Unit	Local Schools	Number of Observations	Number of Documents Collected and Analyzed	Total Pages of Transcribed Field Notes
Eastern Private	18	6	15[1]	10	7	72	220
Midwest	16	13	34[2]	25	11	65	410
Eastern State	22½	15	11	8	21	70	341

[1] Nine with graduate students
Six with informants who were also college staff members

[2] Twelve with informants who were also college staff members

3.4. ADEQUACY OF THE DATA BASE

The total time spent on site was short, particularly when separate sub-units within a case were being studied in detail. For the Midwestern State case, findings were consistent and reasonably exhaustive at Arcadia, due in part to the manageable proportions of the site itself. Two site informants critiqued a 20-page summary and detailed causal model (see section 7) before final write-ups were done. The last wave of interviews turned up information that was redundant and contained no discrepancies from previous accounts. Data were thin on the district administrators, although accounts about administrators from other role incumbents were so remarkably consistent that less energy was put into reaching more.

The Three Rivers site was harder to encompass. School administrators tended to be evasive and some teachers more doctrinal than our emerging interpretation of events could support. There was conflict at this site and it clouded the internal consistency of the findings; people simply did not agree on some events and interpretations. However, most of the key research questions could be answered with confidence, more so with respect to the role of the university and the teacher center than with respect to the school district and outlying counties. Very likely, too few teachers were interviewed. Finally, the account of the state-level network was probably accurate, with strong validity in the historical and early periods but less so in the present configuration, where nine centers throughout the state are involved. Findings would have been strengthened by interviews with state education officials and members of the statewide policy and advisory boards.

With reference to the Eastern State case, there were more data collected from the Cardon site (the primary site) than from the Hanburg site. The range of informants was also greater at the Cardon site than at the Hanburg site. Owing to the retrospective nature of much of the data, there may have been selective bias in recall. Wherever possible, information was checked against documentary evidence or other information sources. Overall, informants were direct, open, and responsive. Feedback from the on-site consultants revealed no major discrepancies in the case account and is reflected in the final case study. Data were quite strong at the Office of Field Experiences level. Interviews with state officials and school board members could have further strengthened the report.

The nature of the Eastern Private site network and its long history dictated a rather different interviewing strategy than obtained at the other two sites. First of all, there was no "center" other than the offices in the college itself. There was rather thorough coverage of the persons on the staff of the arrangement including key graduate students over a four-year period. However, because of the large number of districts involved and the nature of their involvement, we did not trace effects indepth in particular districts. Instead we traced effects and principal participants in the most prominent and concentrated subject-centered activity, the writing consortium, and recorded in some detail the experiences of about five fellows who were actively engaged in field work in the school years 1977-78 and 1978-79..

Because of its great significance in the history of educational networking in general, we also traced the historic arrangement through the experience of about eight informants who had key roles from 1941 through 1975; we collected and reviewed a large number of documents and newsletters which reflected the activity of those years. We had to go far afield to find some of these people; three were still on the faculty, one was visited in his retirement home in a remote part of Connecticut and two others responded to us in long telephone interviews. The further back in time the shakier was our evidential base but this was partially corrected by the excellent quality of the early documents. Unfortunately these documents tend to focus more on the substance than the process of network building and management per se. For almost all observations regarding events after 1965, we were able to obtain at least two distinct perspectives.

All names of persons, institutions and localities are fictitious.

3.5. PROGRESSIVE FOCUSSING

The basic technique of data collection was that of multiple interviewing with key informants. The interviews were driven by a core set of research questions, in relation to which a set of key issues began to emerge at each site. These issues focussed much of the energy of informants and illuminated the pattern of resource exchanges, the relative influence of key actors, the institutional strength of the relationship and other mediating variables which appeared to be systematically tied to outcomes. Interviews then focussed on these issues until the most detailed, plausible and independently confirmed account emerged. In some instances, this account was reviewed by on-site consultants for verification. Along with the "answer" to the research question at the close of data collection, analysts would append the prime causal variables accounting for the outcomes being reported.

3.6. DATA ANALYSIS

Analysis of the data involved the coding of transcripts and documents using an elaborate coding scheme derived from the principal research questions. The coded segments were then analyzed and reported in a case study for each site, comprising both a narrative of the IOA and its constituent serials and an analysis of its functioning and outcomes. The analysis was driven by the research questions and built, incrementally from a catalogue of coded segments to their classification (by type, valence and/or magnitude), then to their insertion in a matrix or figure which was standard across the three cases. For instance, degree of institutionalization of the various subunits and interorganizational arrangements as a whole was assessed using a criterial checklist derived largely from Yin's (1978) work on routinization.

Cross-site analysis began with a review of the three narratives for common or contrasting themes, threads, outcomes and mediators. A list of these variables was then generated and compared across sites. Examples of variables emerging from narrative comparisons include environmental turbulence, theoretical pluralism, presence of back-up resource bases, boundary permeability, teacher militancy, etc. These variables formed the core of causal analyses (see section 9) tying these antecedent and intervening variables to different configurations of outcomes.

Work on the analytic part of each case report began with a comparison of charts and figures, from which "meta-matrices" were constructed to include all data. Contrasts, commonalities, frequencies and magnitudes were estimated from these data.

The procedure then followed the same sequence as for the analysis of each case, moving research question by research question, then reporting on causal factors as they affect outcome configurations.

PART FOUR: HISTORY

Each of these cases is a history, the recording of major events related to the development and sometimes the decline of a particular social phenomenon. They involve names, dates, and places. The narrative summaries of Chapter One provide those histories, one by one. The task of this chapter is to try to put them together and to draw general conclusions from a comparison of separate developmental patterns. We will do that in two ways. First we will try to cast all of them in a larger historical perspective, as social creations which reflect the times of their origin and which are inevitably influenced by social, political, and economic currents that are flowing in the larger society. We will call this "real time" analysis.

Our second approach will be to compare these IOAs as evolving social organisms, using the five stage model suggested in Chapter One, namely "germination," "growth," "consolidation," "recession," and "termination."

4.1 REAL TIME ANALYSIS

4.1.1 Trends in American Society Affecting Education: 1930-1980

Demographics are important for education, and so are economics. In the 1930's the birthrate went down as a by-product of the great depression. That probably meant that there was less stress on educational institutions in the late 1930s and the 1940s than there otherwise would have been. Another depression by-product, the New Deal, represented a major redistribution of power toward the federal level and more federal intervention in social affairs than had been known in the United States up to that time. It seems, however, that the New Deal had little direct effect on public education and its institutions. That sector remained firmly in the hands of local authorities and fully dependent on local tax sources.

The Second World War was a watershed event: it heightened national pride and solidarity; it led to a significant shift in public awareness toward cosmopolitanism and internationalism; it led to major relocations and dislocations in the labor force, shifting more and more people off the countryside and into the cities and suburbs where the jobs were, and perhaps above all it created full employment and a return to a level of economic prosperity that had not been experienced for 20 years. The result of all that was a baby boom in the late 1940s and early 1950s, and an increasing concern for education as the 1950s rolled on.

Probably the most significant educational event of the 1950's was the Supreme Court decision in Brown vs. Board of Education (1954) which outlawed segregated patterns of education within school districts. It was a major break with the principle of local autonomy in educational matters. It put tremendous new pressures on school boards and school administrators, especially first in the south but later all over the country. It brought public education into the political limelight and weighted educational decisions with controversy. It also established a new kind of goal for education, namely to foster equality of opportunity and equality of educational offerings for all students regardless of race or origin. Because the mandate for desegregation was federal it was logical that support for meeting the mandate also come from federal sources, but through most of the 1950's federal aid to education was bottled up in another complicated and thorny constitutional-political issue, aid to private and parochial schools.

The log jam was broken with Sputnik and the National Defense Education Act of 1958, clearly responsive to the Soviet challenge or threat, and providing the first substantial federal funds for elementary and secondary education, largely through the support of special projects, R&D centers, information centers, and curriculum projects in science. NDEA established the principle of federal support for improvement of education across a broad front of activities which were supplementary in nature. Thus the constitutional church-state issue was evaded because direct school subsidies for routine operations were ruled out.

Through the early 1960s pressures for social justice and equalization particularly from the black minority increased on the dominant Democratic party, and with the landslide victory of 1964 (which resulted largely from popular fear of a militarist right wing leadership) those minority concerns were served through a series of major pieces of social legislation which the president dubbed "The Great Society." The Elementary and Secondary Education Act of 1965 was a major part of that legislative program and its contents heavily reflect concern for the poorer,less privileged segments of society. But like most complex legislative actions, the bill had in it something for everybody while at the same time it continued to skirt the church-state issue by defining each Title of the act as a set of supplemental, demonstration, or research and development activities which would not alter the basic structure of state and local education authorities nor the basic fiscal arrangements through which schools are supported. Most importantly at all levels in all types of educational settings and it encouraged a special type of entrepreneurship previously quite rare in education in which people with ideas of new types of training, cirriculum reform, technical assistance, or supplementary services of some kind or another could write up their ideas as formal proposals and receive (typically) three year grants to demonstrate and propogate their ideas. Sums spent on such grants were substantial in many cases and out of all proportion to what had previously been available to all but the most elite colleges with good access to private foundation sources. A typical small project might run $50,000 per year but many larger projects involved $1,000,000 per year or more, especially if they were large districts dealing with equalization issues.

By the late 1960's and early 1970's a different political climate prevailed, significantly reflecting the divisiveness of the Vietnam War, but also reflecting growing conservatism by a majority and increasing skepticism regarding the great society as a whole. Yet, while conservatism was on the rise, so was militancy on the part of almost any group or stratum of society which could feel itself victimized. That included both students and teachers. Such militancy led to some short term victories in the form of increased student participation and teacher contracts in various more progressive areas of the country, but it also tended to erode popular support for education generally.

Educational developments of the 1970s can be partially understood as reactions to the 1960s, but demographics also would appear to be a significant factor. For whatever reasons birth rates in the United States declined markedly in the later 1960s and the effect was felt by schools starting in the early and mid-1970s. For the first time in a generation, enrollments were declining--substantially in many areas--and as each cohort made its way through the grades the effect was felt more and more severely. There was not a teacher glut instead of a teacher shortage and, on top of that, families without school-aged children were more and more reluctant to pay taxes at the local level necessary to support public education adequately. Proposition 13 in California and Proposition "2 and a half" in Massachusetts reflected this shift which culminated in the election of Ronald Reagan as President in 1980, with concommitant shifts to the right in Congressional representation.

The effect of these recent trends has been a drastic curtailment of innovative activity at all levels with a near shut-down of many federal programs, while local districts and states continue to reduce their budgets. In such a climate it is very relevant to look to models of practice improvement which depend little on major fiscal inputs from any source and depend fairly heavily on volunteerism and reorientation of existing resources, structures, and person-power. By the same token, these current trends suggest the relevance of searching the past before the great surge of federal involvement for models of school improvement support which might once again be applicable in some modified form.

4.1.2 How IOAs Were Affected by Major Social Trends

The original Council emerged out of two decades of development of measurement capabilities in education. What was especially impressive about the work of the founder prior to 1940 was the fact that he operated on such a grand scale, probably with the help of a lot of volunteer effort by school people and unpaid research assistance by graduate students eager to be associated with this dynamic master of research on educational finance and administration. The notion on which The Council was founded also reflected the times. It was essentially an elite notion--that only certain districts had the financial base to provide quality education and only among those districts could one find the most highly competent and innovative teachers. Indeed, it was on this same notion that this College of Education had been established two generations earlier. The founder's plan was to develop instrumentation and a capability for repeated measurements of innovativeness for entire districts. When such information was shared in comparative form it would act as a powerful competitive incentive for one district to catch up to another. Thus in a subtle and non-coercive way both the ideas and the incentives for practice improvement could spread from one district to another, first within the relatively affluent circle of The Council member districts but then also through the network of national associates.

In the late 1940s and through most of the 1950s this idea worked very well, not only as the number of members and associates grew but as the idea of The Council spread across the country to other universities, private and public. Indeed, there is some evidence that early efforts at Eastern State were director affected by the example of The Council. It was a model that fitted the times in several respects. First of all, the University of origin was one of the most respected in the country, the home address of many of the great educational philosophers and researchers of the pre-war years. Secondly, research in education was still a relatively new phenomenon,much respected and not embroiled in the controversies with which it was beset at a later time. Volunteer effort by teachers and others was a natural and routine way of getting things done. Finally, it was the only game in town. There were no intermediate centers, few community colleges, no grants programs. Central districts staffs were generally small and lacked staff development or in-service capabilities. All these elements in the historical context converged on The Council and assured its success.

The Council movement was also important in the early and middle 1960s as federal funds began to become available because councils constituted a sitting capability for training and problem-solving which could be exploited as a base for new, ambitious, and well-financed programs. In general, universities like Eastern Private and Eastern State were among the first major beneficiaries of an altered federal posture toward education after Sputnik. By the mid-1960s, every major university was likely to have more than one fairly large project for reserach, development, and/or training. The Research Institute of which The Council was a core element at Eastern Private was the recipient of more than one such grant, and one long term training grant allowed the Institute to double its staff and its measurement capability during the later 1960s.

Eastern State and Midwestern State were also significantly affected in their early history by federal largesse. At Eastern State a large federal grant led to a major expansion and elaboration of the teacher center model. It also led to conflict between the entrepreneurial director of the program and faculty in secondary education concerned about their turf and perhaps envious and resentful of the attention and power which seemed to be accruing to the director. Internal strife within the University led to the departure of the director with many of his key staff along with the bulk of the funds. Thus the influence of federal funding availability was mixed. It led to a period of expansion and to experimentation with new models of teacher center activity (some of which received national acclaim) but it was also disruptive and in some respects destructive, being too much too fast for absorption into the college. School districts were also jolted by the now-you-see-it-now-you-don't intrusion of university activity.

At Midwestern federal involvement began in 1965 with USOE participation in a state-wide assessment of teacher education. The Experimental Teacher Education Program which ensued from 1968 to 1972 was also an add-on program of limited duration much in the mold of other federal support for educational endeavors. The Experimental Program was a crucial preliminary to the subsequent network activity at Midwestern in more than one way. First of all it brought fresh new talent into the state, Saganne in particular. Second it served as the test bed for a new ideology of teacher education, practice-based and teacher centered, egalitarian, and oriented to building self-development capacities and self-directed individualized learning. Thus it was a veritable pot-pourri of the more liberal educational ideas that were sweeping the country in the late 1960s. The Experimental Program operationalized these ideas. It also attracted the cream of young and talented teacher educators within the state. When these individuals returned to their various colleges and administrative posts they formed a powerful informal network of like-minded people who became the seeds of the later formal network. The Experimental Program also had some disruptive and unwelcome effects. The second cohort of trainees turned out to be largely from outside the state and oriented more to the strife-ridden issues that were now the preoccupation of more cosmopolitan centers on the east and west coasts. These individuals were viewed with suspicion and alarm by traditional educators who still dominated local school districts. When Saganne proposed the new network, there was some local resistance because of the radical reputation of the Experimental Program of which he had been the director.

By the time our study began, none of the three networks had any significant federal support, although Midwestern had a fairly substantial, though partial, third-party support in the form of a five year foundation grant. They had each lived through the more hectic times of the late 1960s and early 1970s, had each been scarred by them, had each learned from them, and benefitted from them. Of the three arrangements, Eastern State seemed most secure, and the strongest local arrangement involved a small college in Midwestern State (Arcadia) which was really developing its service configuration without regard to future state or other third party support. Eastern Private, even though it operated on a shoestring was continuously threatened with funding cuts from the university and from reduced membership subscriptions. Most of the Midwestern network seemed shaky beyond the period of foundation support and aggressive efforts were underway to secure either state support or additional federal support.

Demographic trends also affected the development of these networks. Eastern Private's Council thrived in the 1950s when suburban school districts were expanding rapidly and confronting a host of issues that come with expansion. Innovation was "in" so that opportunities for top administrators to see what their colleagues in other districts were doing were highly valued. When support declined along with enrollments, districts turned inward. The appeal of the revival period was more clearly focussed on teacher development and responding to teacher concerns and needs for work enhancement and mobility in an environment of scarcity and attrition, when more expansive alternatives such as paid sabbaticals were in sharp decline.

At Eastern State the College of Education grew by leaps and bounds during the period of population boom, turning out more and more teachers and having greater and greater needs for pre-service practice teaching placements. The original network was established largely for this purpose and also to give school districts "a window on the talent" that was coming along. As the downward shift affected districts, interest turned more and more to in-service training, and the story of recent development among the teacher centers is partly a story of that shift in orientation.

The Midwestern network reflects the situation in a state which had declining population and enrollments throughout the 1960s and 1970s. Starting with the needs assessment of 1965-67 teacher renewal and upgrading was the chief concern and a prime rationale for the current networking activities as well as the Experimental Program at Midwestern State University which preceded it in the 1968-72 period.

These brief observations should make us aware that these networks are largely creatures of their time and culture. They emerge from and reflect trends in the larger society, especially demographic trends, economic trends, and political trends. All three have been influenced by the period of great expansion in the federal role in education despite their present relative independence from federal support. They were also influenced by the surge of new ideas that came into education along with the federal initiatives.

4.2 DEVELOPMENTAL ANALYSIS

To a very large degree each of the IOAs studied has been a successful venture up to the time of writing. Indeed,they were selected for study because of their success. We can imagine,however, that not all such ventures are successful, that some never get past the idea stage while others founder soon after their founding. Still others may have flourished for a short time or a longer time,then to have faded away or perhaps to be transformed into something else. Indeed, when we look at each of our cases historically, we find that there have been various forerunners. Many key actors came from prior experiences with other networking efforts. The Eastern Private IOA had had at least two distinct prior "lives." The Midwestern IOA had followed from a history of networking activity in the state. The dean who originally fostered the IOA activity at Eastern State had been involved in a previous effort in a midwestern state, and so on. Each of these many IOA enterprises had its own germination, founding, and period of growth. Most also must have experienced consolidation and recession at one time or another, and many, if not most, had experienced some aspects of the experience of termination. Our task in this section is to look at each of the "living" IOAs in these terms, as an organic developmental sequence as described previously in section 1.3.4. "The Rhythms of Time."

Our understanding of developmental sequences is expanded by consideration not merely of the IOAs as a whole but of the sub-analyses presented in each case of the life histories of localized centers and the clusters of event sequences which we called "serials." Each of these subelements has its own developmental sequence to which the same analytical schema is applicable. Indeed, when we descend into more microscopic analyses we immediately find a much greater variability, and perhaps greater clarity. For example, we can readily trace the "Fellows" program of The Council revival period from birth through hectic and rapid early growth into a period of confusion, division, and dispersion in which a few Fellow activities were consolidated while others were not. By the third year there was clear recession and in the fourth year the program could be viewed as either terminated or so far transformed as to be something else, even though the term "Fellow" lingered. In the Arcadia case we see in each serial the dynamics which make that Center so successful. There is a firm grounding in teacher needs and usually in ad hoc teacher encounters with materials or training experiences. Decision making about start-up is decisive and rapid; growth is measured; consolidation always takes place and usually in a synergistic way so that the strength and reputation of the Center as a whole is enhanced and maximum advantage is taken of existing resource and network ties.

Unfortunately we do not have the capability of comparing each of these microhistories in detail. Such an analysis would require more detailed evidence on each case and would easily consume a separate volume. However, we hope that the gross analysis of each stage presented below will suggest the fruitfulness of further pursuit of this type of approach.

4.2.1 Germination

In every case study we sought definitive beginnings but they generally eluded us. Interorganizational arrangements generally begin with other interorganizational arrangements, sometimes formal, sometimes informal, sometimes another sort of arrangement serving a somewhat different set of purposes, sometimes the same arrangement in a prior existence. The Eastern State IOA was most clearly a continuation. The marking point for the present phase was the assumption of office of the present director of the Office of Field Experience (OFE), Goldman, but even Goldman had a history of working with OFE as a facilitator and innovator dating back some years. Indeed, it was Goldman's intimate knowledge of many of the actors and interests involved that made him so successful in his new role where he managed to expand operations in a deliberate way and managed to greatly increase networking among the centers without ever arousing suspicions or animosities as his more visible and aggresively entrepreneurial predecessor, Carter, had done a decade earlier.

Germination at Eastern Private also involved the entrance on the scene of a new key figure, Alice Loveland, and her assumption of a nominally on-going enterprise. In fact, however, the shift to Loveland was far more dramatic than the shift to Goldman, since it involved an entirely new staff at the University, a new ideology, a new program, and a membership which was also very largely newly recruited. It also appeared that the IOA would have terminated formally without her intervention.

The Midwestern IOA might appear to be most clearly a new start but it built on a strong pre-existing informal, carefully nurtured, network by the dynamic dean, Saganne, and remaining as a residue from the highly successful Experimental Program which he also headed.

The past has an inevitable power over the present. It lays the foundation of established social relationships and innumerable remembered activities which can be resurrected and modified to fit the present. The past also gives a list of lessons learned, do's and don'ts, what must be repeated, strived for, and avoided. These are generally positive aspects of the influence of the past. But there are negatives as well, prejudices about people and situations which might have changed. In both the State cases there was a burden from the past as well as a blessing from remembered reformers who were too brash, too fast, not enough trusted. Perhaps worst of all, the past tends to set limits on images of what is possible, a belief that if things are done in a certain way they won't work, ignoring changed circumstances, resources, and people. Finally, it should be noted that much of the past is just plain forgotten, what Lewin called "the foreign hull," incapable of influencing actors in the present because they are simply unaware of it. We felt this strongly in the Eastern Private case where much of the 35 year history was retained only in the recall of persons who had next to nothing to do with the present configuration. For better and/or for worse the revival Council was its own thing, not a successor or a builder on past achievements of The Council.

From these three cases we conclude that the most obvious precondition for IOAs is a pre-existing network, either formal or informal. This conclusion is strengthened when we delve further into the past and consider the life cycles of the networks which preceded. In each case there was yet another network activity of some kind which led to the emergence of the historical network. For Eastern Private there was, of course, 35 years of history, 20 years of the original "Council" under the founder's charismatic leadership, a 10 year second life under his long-tutored and able successor, and a 5 year period of decline and uncertain leadership in which the name and reputation were preserved but little more. Yet reaching back beyond these years we find already in the 1930's a cluster of school administrators, many graduates of the founder's program, participating in his projects. We also find that the College of Education has had ties to many of these same school districts of The Council from its very beginnings.

At Eastern State there had been a long history of faculty involvement with various county school districts as placements for student teachers and their subsequent supervision were developed. This IOA came into being as a reformulation of these arrangements, influenced by the dean's prior experience with yet another IOA in a midwestern state.

At Midwestern State the Experimental Program which was effectively the precursor of the IOA was itself the outcome of a major teacher training needs assessment program in the state from 1965 to 1968. We also know that there had been many efforts through the 1960s and early 1970s to formalize arrangements at Midwestern through federal or state grants. Further, to some degree the Midwestern network was influenced by a small nationwide network of educators who wished to create a U.S. version of the British model of teacher centers. Thus in all three cases there were strong roots in existing informal networks and formal networks developed at previous times and other places which served as models.

From all this one might conclude that these IOAs represent a minimum of creative effort, but this was definitely not the case. Each was an important new departure, not merely an expansion or extension of what was there already. The innovative aspect has two manifestations, first the leader, and second, the ideology or the idea, the concept which is supposed to be embodied in the new IOA. The two are interconnected.

The central importance of leadership is especially obvious at Eastern Private where first the founder, then the successor, and after a five year interregnum, Loveland, were each the dominant guiding force; in each case it was their concept that was fulfilled in the work of the IOA, it was their clout and connections which legitimized it, their loyal disciples which staffed it, and their energetic leadership which sparked it. The same could generally be said of Saganne's Midwestern IOA with some modification. In the first place, Saganne's ideology was militantly decentralist; he did not want to be the sun king--rather he believed that initiative could and should be shared broadly. Yet he found himself continuously interjecting his own efforts to build the system and to keep it going, both statewide through innumerable proposal writes and re-writes, and especially with the local Three Rivers Teacher center, making personal appeals and fighting fires as the center struggled for birth and then growth. What made the Three Rivers Center so shaky in its starting phases was the absence of a leader on-site with the adequate clout and imaginative skill. In contrast Arcadia had a two man leadership team of great dynamism as well as high sensitivy to local needs and conditions. Thus they were able to keep their strong ideological concerns nurtured in Saganne's experimental program enough in the background so that they did not scare off the cautious but needy local teacher constituency.

Discretion was also Goldman's hallmark at Eastern State, weaving his way through the minefield of intrafaculty jealousies and turfdoms. It almost seemed as if Goldman had spent a career studying the mistakes of his predecessors and carefully avoiding them while pursuing the same ends. Goldman was less overtly ideological than either Loveland or Saganne or even Lessing but he was clearly interested in building stronger linkages with the counties and linkages among the teacher centers across counties through his monthly sharing sessions and his annual retreat.

It might be surprising to note that germination was only slightly influenced, if at all, by previous research and theory regarding networking as such. The Council, in spite of its wide fame and long history of success, had never been studied or reported on in an analytic way. Loveland, herself, was well versed in theory and reserach on the change process in education and had worked with a well known west coast educator on developing school networks. In addition, she called in a noted researcher on social networks to keynote her first major meeting with newly recruited superintendents (the meeting was stormy and the expert was roundly condemned by superintendents for arrogance and aloofness). Loveland's Fellows group also discussed "theory" in their bi-monthly meetings. But field work and conferencing workshoping were all seat-of-the-pants ad hoc opportunism. The exception might be the Writing Consortium, where the coordinator went to some lengths to read up on network research (some of it by the very same expert) and to deliberately plan how the consortium should develop utilizing such precepts.

The theory base at Midwestern State was intense but more localized. It was especially noteworthy in the start up phases of the Three Rivers Center where the strong teach-centered orientation and problem-solving orientation of the coordinators

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seemed to confuse teachers and sow seeds of suspicion in administrators. The Three Rivers seemed to succeed more when it acquired a coordinator who was willing and able to keep ideology in rein while attending to operational details and self-perceived teacher needs. Lessing, at Arcadia, starting out this way, allowing his strongly held views (developed through Sagannes' program) to be realized as an ever-unfolding product of synchronized operational arrangements. He did not preach, he showed.

At Eastern State, ideology is far less in evidence, especially on a network-wide basis. Rather, Goldman developed a climate in which individual coordinators would work out their own strategies. At Cardon County--as revealed in the "bridging serial"--a pattern emerged which was similar to that at Three Rivers: one coordinator vigorously promotes the concept of bridging as a real "need" as the district moves toward a middle school concept. These initial efforts are set aside by district administrators but are later adopted when a subsequent coordinator reintroduces them in more operational form with a more low key advocacy strategy.

Finally, we might consider the extent to which IOA germination represents a response to felt needs at some level. Here the evidence seems to be rather weak. In every case, germination resulted from initiatives taken at the college level to provide some new kinds of services--a new or reworked "bargain"--to which districts, schools, administrators, and teachers eventually responded, usually gradually with growing enthusiasm and decreasing skepticism, providing the offerings were indeed seen as needed after the fact and provided the bargain was a good one. In the Eastern Private Case and the Midwestern Case the stimulus from the colleges seemed to come to the districts almost out of the blue. At Eastern State there was an existing and evolving expectation of a relationship dealing primarily with pre-service student teacher placements and supervision which

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gradually shifted to in-service.

A fifth ingredient of germination logically would be resources or resource availability. True,each new IOA effort required new resources, but in no case were the resource requirements very great and resource providers in every case played a passive role, i.e., there were not fresh announcements of resource availability (as there would be, for example in a federal RFP or grants announcement). The private foundation grant for the Midwestern IOA was negotiated quietly over an extended period of time during which more than one request for funding from other sources was turned down. In the Eastern Private case, revenues were initially requested for start-up from the long-standing research endowment fund, and acquiesence in the modest request was immediate and willing. Additional revenues came from the recruitment drive for new district memberships which ensued. In the Eastern State case there was a tradition of negotiated and shared costs between the University and County districts. Again the amounts involved were relativtly modest and resource availability was not the most salient issue and certainly not the inspiration for new starts. Thus we do not see in any of these cases the pattern of opportunism and exploitation of funding sources that were reported as a common local response to federal programs in the oft-cited Rand study.

Thus germination appears to require five ingredients but not in equal proportion. Number one is a networking past--networks build on networks. In a way this is a discouraging finding from a policy perspective because it suggests a certain hopelessness in building from scratch, putting something together where nothing already exists. On the other hand, it should teach us respect for the phenomenon, for the difficulty of creating anything as socially complicated as a network. The number two ingredient is a leader or a promoter, someone who cares deeply about bringing the arrangement to life, who has the energy, the clout, and the talent to put it all together. Sometimes there is more than one such key person but if there are two they are likely to play complementary roles as in the Arcadia sub-case, with one clearly more critical at the operational level (Lessing in that case). The third requirement is the concept, the idea, ideal, or ideology around which the new representation or configuration is built. The old network, of course, is one idea, but in the three cases we are studying, where there is a clear break from the past, the old network concept, if it is important, must be blended or transformed with some new conceptual elements. These may come from theory or, rarely, from research, but more typically the concepts of origin are folklore, gilded myths derived obscurely from a far away past or place. Number four is need, but not a need driving up from the many but aroused through the prolonged stimulus and suggestion of the few. Finally, there must be some sort of resource availability. This might be very modest, and again in all three of these networks it is entirely passive.

We can gain some further insight into the generation process by comparing successful versus troubled generative stages. All three IOAs had some troubles in their past. Eastern Private had a five year period of shrinkage and inaction; Eastern State a period of turmoil and shrinkage following the conflictful departure of a dynamic leader and his entourage; Midwestern State, a series of failed proposals plus a reputation for radical disruptiveness in a conservative state. But the important test was in how these past blemishes were handled in the present, and here the insight and deftness of leadership was crucial. Of all the cases and sub-cases the most seriously defective at the germination stage was Three Rivers where skilled, legitimized, and potent leadership on the spot was absent for nearly two years.

4.2.2 Growth

Probably the most exciting and memorable stage in the life of an IOA is the growth spurt which takes place in the first and second years. Our cases represent a range from very rapid to moderate growth during this period. Midwestern State, boosted by the large foundation grant, had four centers across the state operational within one year, with thousands of teachers nominally involved. As noted in the case study, however, the center at Arcadia was already operational before the statewide network was formally launched. Eastern Private also experienced a very rapid growth spurt beginning with the recruitment drive and two key conferences roughly eight months after Loveland took over. The heyday of The Council revival was the second year of operations when Loveland was in the saddle with a dozen Fellows, each involved in a separate district, with special activities organized separately for teachers, principals, and superintendents, with two semi-annual conferences with high attendance, and with several continuing workshop series on different "hot" topics. At Eastern Private the second year there was a sense of great excitement and dynamism as well as optimism; there was also a great deal of confusion among the Fellows regarding their separate and collective roles and not a little exhaustion. Planning was helter skelter at both sites with the dominant theme being to "get something going." At Eastern State these qualities were somewhat less in evidence because of the extensive planning based on past Center models at Cardon and the on-going history at Hanburg.

The critical question for the growth period is how to sustain the forward momentum and the motivation while at the same time exerting a kind of control and orderliness that will ensure long-term survival. It is generally the case that such concerns get scant attention from dynamic innovative leaders in the first flush of their success. The prevailing concern in the early stages is that there should be growth at all, because without growth there is nothing. Growth is generally fostered by a core membership which surrounds the key leader. This was most obvious in The Council revival where a very enthusiastic, staunchly loyal, and hard working cadre of graduate students formed ranks behind Loveland. At Midwestern the crucial growth period probably took place a few years before the network was officially founded and funded, during the first two years of the Experimental Program when the cream of rising young professional educators across the state came into the program with enthusiasm and, on returning, became the Saganne network, keeping in regular contact and providing access to every level of education from the state department on down. The grant allowed the network to be remobilized.

Financing, how much and where from, is an important matter to consider as a growth ingredient. Money can be a lure (for germination) but it can also be seen as the rain which allows the network seed to grow. All three IOAs appeared to have enough financial support for growth during the period of study but for Eastern Private and Eastern State there had been periods in the past when there was much more money and growth had been more dramatic. In both cases these higher levels of support appeared in the 1960s and came from federal sources as did Midwestern's somewhat later Experimental Program. In all three cases there were significant residual outcomes which were negative from these federally supported growth spurts. For Eastern Private the federal grants meant decreasing dependence on local school districts for funding and probably a concomitant decrease in meaningful interaction and interdependence. Because the thrust of activity in the late 1960s was a large research and instrument validation project in which districts had a relatively passive involvement, the termination of the federal support, coming as it did with the retirement of the Director, had a disastrous effect on The Council in the early 1970s. At Eastern State the large federal grant stimulated tremendous growth in the late 1960s along with great distrust and probably considerable jealousy among the faculty, especially in secondary education. When the Director departed with much of his staff and the grant disappeared there was a similar attrition although the on-going contractual nature of the mutual obligations and the continuing value of the bargain kept the Eastern State IOA functioning at a higher level than the Eastern Private through the first half of the 1970s. At Midwestern the consequence of the federally fostered growth of the Experimental Program was the influx of students from outside the state after the first wave of in-state educators had passed through. The second wave was seen by many local educators as a more radical, meddlesome, and troublesome group; reactions to this image made for some initial resistance to Saganne's and others' attempts to establish teacher centers a few years later.

Use of third party financial resources was especially noteworthy and perhaps most judicious at Arcadia where the director did not use funds to increase staff or space but rather to stockpile reusable materials, nowhere else available in his region. These materials could long outlast outside funding and were a strong magnet to teachers in the area. We might also note the advantages here of flexible foundation funding which allowed individual centers to make separate judgements on how funds would be allocated.

4.2.3. Consolidation

By the time our study began, all three IOAs were clearly into a period of consolidation. For Midwestern, there was activity at each Center aimed at securing continuation of support. In part this was a matter of selling the Centers to local authorities as well as building a sense of ownership and commitment among teachers. At Three Rivers this was quite a struggle which seemed to come to fruition only after a complete turnover of coordinators and after the threat of shut-down from the administration. At Arcadia the one-week summer program out of which numerous teacher projects emerged was an important consolidating feature. The summer program got teachers involved in their own production of materials and also required commitment to follow-up reporting. It thus encouraged continued contact and allowed initial drop-in and browsing visits to turn into strong continuing connections from which multiple resource utilizations emerged. Teacher projects also provided continued tests for gaps in the resource base at the Center which were then filled. At the state level Saganne and his staff were busily trying to solidify financial support through additional proposals and particularly by using their leverage with state officials to secure official status. This kind of activity led some respondents to worry about "getting bureaucratized." To a degree, getting bureaucratized was a major thrust at Eastern State where contracted arrangements between each district and the University were intricate and specific. At Eastern Private during The Council revival consolidation was a problem which probably received inadequate attention. The extended absenses of the coordinator, Loveland, after her second year of involvement, left the IOA in a somewhat troubled state with uncertain stand-in leadership, divisiveness among the Fellows, and uneasiness among the superintendents on the board. Because the Council lacked the formalized procedures of Eastern State and the clear bargain with the membership which developed at both the other sites, there was no obvious formula for consolidation. What happened was that individual Fellows in some cases developed their own formulas, notably the Fellow who, almost entirely on her own initiative, established the writing consortium which linked six districts on a continuing basis. Even the writing consortium, however, was a temporary system, and after two years appeared to be running out of motivation and clear purposes.

Consolidation is obviously a stage that doesn't necessarily happen. At the Eastern Private Council during its early heyday years it seemed that every activity inter-related with every other and each new activity built on and added to past activities. The same appeared to be true on a much smaller scale at Arcadia. At Hanburg County in Eastern State, consolidation was partly a function of continuing involvement of an innovative, capable, and credible local leader, as it came to be at Arcadia, as it was in the original Council, as it might have been and partly was in the revived Council. This suggests that true consolidation requires the consolidator, the leader who has a continuing presense so that everybody can continue to feel good about what is happening.

4.2.4 Recession

After a period of rapid growth there must eventually be a pause of some kind, a gasp for breath, a lapse, a return to normalcy. When this pause is integrative, we can call it "consolidation" but it need not always be so. Growth may be followed by decline or shrinkage and even consolidation can be followed by decline and shrinkage. In each of the cases studied we saw some of this, particularly when we went back to examine the historical record. At Eastern State there had clearly been a shrinkage of activity after the dynamic (and federally supported) days of director Carter. There had also been the loss of Martinville County, the wealthiest county in the state and the most progressive in educational terms. At Eastern Private, historically we had seen a waning of enthusiasm with the retirement of the founder and then a sharp decline after the retirement of his successor. In the contemporary period at Eastern Private we also saw decline in the utilization of Fellows as change agents and the lapse of the work group process (workshop series). Even within the successful writing consortium, interest and attendance fell in the second year. At Midwestern we get less of a sense of recession in the activities reported although there are strong hints or forebodings of this in discussions of fiscal constraints for coming years and the long trail of unsuccessful proposals from Saganne's office.

Can we make of these different scraps of evidence a theory of decline? Clearly not. We cannot even say on empirical evidence that that which goes up must come down, although we sense that there is some such imperative at work. We can propose a few alternative explanations of why recessions occur. First they probably occur to a degree in every IOA because of a build-up of tensions which eventually must be vented. Secondly, they are likely to be made much wrose, even irreversible, when there has been inadequate attention paid to consolidation, or when, for whatever reason, there has not been a preceding consolidation phase. Thirdly, decline may be forestalled by formalization of procedures and arrangements although they are not clearly prerequisite to the long life of an arrangement, witness the longevity of The Council (the founder of the Council was actually reported to have a distaste for formalization of network arrangements, and for many years The Council had no by-laws, constitution, or other legitimizing and routinizing documentation). Fourth, decline can be precipitated by leadership turnover or turbulence (as through extended absences). Finally, and perhaps most obviously, recession can result from shrinkage of financial (or other) resources. The habit of third party funding agencies including the federal government to support projects for a limited duration (three years being the typical maximum for the feds) exaggerates the rise and fall effects that naturally occur in new ventures such as IOAs.

4.2.5 Termination

Fortunately for themselves but unfortunately for social science, none of the IOAs studied terminated their existence before our study project terminated its existence. In lieu of such empirical nuggets, we sought and reported on perspectives toward the future which might indicate terminal status for one IOA or another. As of our last data collections it appeared that all were surviving although Midwestern had the black cloud of foundation grant termination over its head and was awaiting state or federal support which seemed by no means assured. While the picture for the state-wide network, centered at Midwestern University, seemed somewhat bleak, this was not the case for the Arcadia site within the state which seemed destined to continue in a very solid and productive style for years to come. Eastern State appeared to be quite secure but dependent for its network dynamism on Goldman's continued presence. Eastern Private seemed especially tenuous as we concluded the case write-up, although we have since learned that a robust season followed with many workshops and two more successful conferences.

Within Eastern Private, however, we have at least one instance of a termination involving the serial of the Fellows program. The case is especially interesting because the Fellows concept in the revived IOA was clearly one of collaborative problem-solving around teacher or school defined needs and problems. Each of the three IOAs had this goal explicitly or implicitly, but at Midwestern and at Eastern State the problem-solving objectives were approached gingerly and came to fruition only as a result of and building on pre-service and in-service training and ad hoc workshop activities. The Fellows program began as an exciting and innovative venture. The growth period was hectic and heady with each Fellow finding out what it was like to be an outside change agent and having the challenge to work out their own role. Regular discussions throughout the first year and the second year of this program allowed each graduate student an opportunity to share and compare experiences, to model on others, and to learn from the mistakes of others, but the program was quickly orphaned when the dynamic Loveland took a leave of absence. Substitute leadership could not provide the confidence and assurance needed for working out difficult district relationships; vague and uncertain assignments with no institutional rooting and minimal financial incentives added to the downward spiral. In the end the university faculty had to face the fact that such ambitious objectives could not be served by such a flimsy social support structure at either the university or the district end.

The other semi-terminal event documented in our case material was the decision by the administraiton at Three Rivers to zero-fund their teacher center. On reading of the incident, one's first reaction (as was the teachers') is "how could they do such a thing!" but the fact was that the Three Rivers Center had had a troubled existence with the turnover of three co-coordinators after an initially rejected proposal, initially tepid teacher response, and residual doubts about the value of any collaboration with the university.

The blunt fact is that termination happens. It probably happens more often for the kinds of interinstitutional arrangements we have been studying.than most other types of social organizations. Our view of termination is ambivalent. To a degree, we lean toward the notion of the surival of the fittest, even among IOAs. Some are viable; some are not. But viability should not be our primary concern; rather it should be productivity or benefit for education, or uniqueness of contribution to the improvement of education. When we look at an Arcadia, for example, we have little trouble deciding that this is a fine thing, benefitting many people, teachers, students, faculty, community. We can rejoice that a model has been developed which more or less assures continuation into the forseeable future. But what of Three Rivers where the original problem-solving intent was subverted and where service as substation for course registration at the university became the prime basis for the bargain?

Perhaps the most unfortunate aspect of termination is the loss of experience, the loss of institutional memory, and thus the loss of lessons learned. When The Council at Eastern Private virtaully terminated in the early 1970s, there was no energy or interest in documenting a retrospective analysis of what The Council had been all those years and why it had finally faded (nearly) away. When we came to do our interviews we did find half a dozen good informants on the historical Council but we were aware that we could not adequately retrieve this experience which had little to do with the present day Council, yet it represented what was probably the most powerful interorganizational arrangement involving a university in the improvement of school practice that ever existed. It was also productive as a generator of research knowledge as none of the contemporary IOAs have been.

PART FIVE: INITIAL OPERATIONS TO PRESENT CONFIGURATION

5.1. INSTITUTIONAL STRUCTURE: OVERVIEW

Midwestern State. At the Midwestern State site, the network doubled in size, increasing from four to nine centers. This growth pattern did not reveal strong support or strong funding increases. The institutional structure of the network remained the same with important influence and coordinating roles of the college of education dean and his associate.

Turning to the centers, the institutional structure of the Arcadia center remained much the same, although there was rapid growth in teacher center operations. In contrast, the Three Rivers center maintained its two part-time coordinators with a chronic problem of coordinator role definition, and did not grow in operations.

Eastern State. At the Eastern State site, OFE decreased in total number of centers and modified some center formats. (Only one new center was founded in 1975.) The institutional structure of OFE changed as a result of the current director who had a low-key, informal decision-making style. OFE had monthly meetings for staff and coordinators and, in recent years, required a formal, standard annual report and budget for each center.

Focussing on the centers, the Hanburg center added a formal advisory council and also showed an increase in variety of activities. The Cardon center's institutional structure showed no change from its time of founding and formal governance document. Similar to Hanburg, it showed an increase in variety of activities.

Eastern Private. At the Eastern Private site, the structure remained essentially the same as at the time of founding. Everything was run by a core group of three or four people. Membership also remained fairly steady in terms of participating districts with a slight decline in total number.

In the fellows program, the special option of membership category placing a fellow in a district for 25 days/month was dropped. In place of this option, diverse and complicated funding schemes developed. Additionally, a new model for working with school districts emerged as a result of the writing consortium. The new model contained the following elements: content-focussed, sustained, multi-level membership groups from a handful of specially interested districts.

Overview. All three cases revealed few major changes in institutional structure. None evidenced tremendous, vibrant growth in overall size. Despite the declining fiscal resources in all three case settings, each case evidenced some growth or change in activities in at least one of its sub-sites. Finally each case had institutional and governance structures which were influenced by the ideology and personality of the IOA leaders.

5.2. MAIN OBJECTIVES

Midwestern State. At the midwestern site, there were relatively few shifts in objectives for the teacher center network as a whole. The ideology remained stable that the centers were to constitute a "human resource exchange," helping to value craft knowledge and to accelerate practice change. Teacher-defined needs were to be paramount at local centers. Similarly, the network continued its latent or implicit aim of co-opting key educators across the state and increasing the impact of its philosophy. One change in emphasis was promoting a preferential status for the centers as carriers of new state level programs and staff development needs. Another change in emphasis was the organization of large scale workshops requested by teachers (to provide recertification credit) which took away time from coordinators' implementation of change-accelerating assistance objectives.

Turning to the teacher center level, the Arcadia and Three Rivers centers' objectives remained the same with some shifts in emphasis at each site. At the Arcadia site, more importance was given to servicing the surrounding community (meeting space for community, community walking and skiing area as a part of nature studies project, art gallery, and micro-processor project to service farmers as well as teachers). Also the center began to emphasize to a greater extent a previously latent objective of altering some instructional practices at Arcadia State and thereby becoming more core to college instructors' activities. At the Three Rivers site, a site which continued to be devoted entirely to in-service activities, coordinators reported that although peer exchange continued to be a primary objective, there was greater emphasis on one-shot workshops on narrowly practical topics and large scale classes to help teachers gather continuing contract hours and post-graduate credits. Behind these shifts in emphasis at Three Rivers were teacher demands upon the coordinators.

Eastern State. At all three IOAs (OFE, Cardon, and Hanburg), there was an important shift in the weighting of objectives between the present and the early years of the IOA. The shift was toward a broader definition of in-service objectives and away from a narrow conception of center in-service focussed on the supervision of student teachers. Reflecting this shift at the OFE level was OFE's current interest in outreach programs. At the Cardon and Hanburg level, the addition of more and more staff development activities and the increased energy devoted to in-service emphasized the change in weighting of objectives.

Behind this shift in emphasis was the declining number of student teachers and the increasing fiscal stringency in the counties. Adding and emphasizing in-service activities contributed to the stability of the IOAs.

In the district level IOAs which remained there was a situation of domain consensus between the district and the college of education. Both Cardon and Hanburg districts had staff development needs which were being filled by the increased emphasis on in-service objectives.

Lastly, OFE was beginning to emphasize the research objectives of the centers in response to the concerns of the new Eastern State president who emphasized research concerns of the university.

Eastern Private. At the Eastern Private site, there were no real changes in objectives as well as no real research objectives. The major *de facto* objective continued to be knowledge transfer via college professors in conferences and workshops. Three other objectives continued to be: creating/implementing inter-district networking and exchange "consortia"; providing field experiences for small groups of graduate students; and providing field contact with the college as a whole.

As in the other cases, there were changes in emphasis among these objectives. The provision of field experiences objective declined in intensity from the time of founding; there was less actual field contact off-site by fewer graduate students. Also the provision of field contact for the college appeared not to be a major or crucial objective. As a matter of fact, the IOA staff appeared very suspicious of district exploitation by researchers.

Overview. General objectives of the IOAs across cases seemed to be very stable over time. However, in each case, there were definite changes in emphasis among objectives and in at least the two state university cases, broadening of initial objectives. This flexibility in focussing on certain objectives and in broadening the scope of others contributed a great deal to the stability of the IOAs. Two factors appeared important in understanding objective changes and shifts in emphasis across the three cases: the environmental setting of each IOA and the ideology/personality of IOA leaders.

11.

5.3. KEY PERSONS

Midwestern State. In the Midwestern case, the dean of the college of education at North Central remained the dominant figure for the statewide network as a whole, assisted by a professor of elementary education who became the second "statewide network staffperson" and sat on statewide advisory groups. Together, they oversaw network operations, intervened to solve local problems, set the agendas and followed up on network business; they also did periodic lobbying within the state education office and within district offices connected to a local teacher center. Many of these contacts linked former staff and graduates of the experimental program.

In 1980-81, two names appeared with greater regularity; those of two senior administrators in the state education office and delegates to the network's decision-making boards. As the network grew, its appeal as a vehicle for delivering state programs and in-service requirements increased. As a result, more business was done between the state and the network via these two intermediaries. They also helped to line up support when the network applied for state and federal funding.

Another important feature associated with key actors in the network is their instability. In 1979-81, staff departed or turned over at three of the four original centers. One coordinator reasoned that "burn out is pretty high, I think, among coordinators." This was attributed to the low salary, multiple demands, heavily interpersonal nature of most tasks and to coordinators' frustration with the displacement of goals from one-on-one consultation with teachers to the organization of large-scale workshops.

At Arcadia, the cast of main characters remained constant in the succeeding two years, with one important addition, an assistant professor in language arts who joined the center staff. She, the coordinator and the documentalist remained the mainstays within the center; the department chairman provided administrative and financial help.

At Three Rivers, the set of key persons included the coordinator, the center secretary and a "resource colleague" paid for by foundation funds. In the third year of operations, the elementary education professor at North Central who was the second statewide network "staff person" along with the dean, joined the policy board, where she was influential. Both she and the dean intervened actively and decisively when there was a threat of suspension of funds from the district office.

Eastern State. After 1975, there was an amazing amount of stability in key personnel of the Eastern State University case. Goldman returned and remained as director of OFE until the present. His low key and flexible style contrasted with that of McPherson and Carter, the founding fathers of OFE. This style was well adapted to running the current OFE and creatively responding to the needs of school districts in Eastern State as well as to the needs of the college of education.

Turning to Hanburg County, the Western elementary coordinator remained the same from 1970 until the present. He reported to the same man until 1979 at which time the man was promoted. The coordinator then came under the purview of the new Supervisor for Staff Development who, in turn, reported to the coordinator's former boss.

In Cardon County, although there was a new coordinator appointed in 1978, key county and college of education personnel remained the same. Thus, there was a great deal of stability in terms of key persons in the Cardon and Hanburg settings.

Eastern Private. The key person throughout the revival period was an energetic and charismatic professor who maintained a very wide friendship circle within the College, enabling her to call on many senior faculty as resource persons. The backbone of the Council during this period were heavily invested graduate students, mostly mid-career teachers and central school district staff members returning to get advanced degrees and finding in The Council's leader someone clearly committed to bridging the gap between academia and the world of practice. One such person headed the Writing Consortium and was its inspiration and driving force while at the same time she put together the revived Council newsletter. Another served as right hand to the director and managed all operational details including a new NIE grant.

For two of the four revival years studied the key person was actually on leave and based several thousand miles away. In spite of this distance she managed to retain a degree of involvement and control through frequent telephone calls and visits at crucial moments. Nevertheless, the absences were a disturbing element, somewhat undermining the morale of the loyal staff and causing concern among some superintendent board members who saw success as depending heavily on the continued involvement of this one person.

During the first leave a senior faculty member with some connection to the old Council was appointed as interim director and a new junior faculty member was hired as the staff coordinator. Neither role received much initial acceptance from the graduate "fellows" who mainly took the attitude of "waiting it out" until their mentor returned. During the second leave the junior faculty member had developed more trust and could assume the coordinator role in a satisfactory manner. However, this person lacked the seniority, clout, and capacity to inspire followers that characterized the absent leader.

Other persons in leadership roles on the university and school district sides acted essentially as endorsers and donors but did not invest themselves actively in what was going on. In the fourth year a new director was appointed to head the endowed research institute in which the Council secretariat was situated. The new director appeared to have some scepticism regarding the value and the appropriateness of The Council in its present configuration. He was particularly concerned with the lack of research productivity of the council and saw it as a drain on scarce resources which should have been devoted to research. It appeared that theCouncil would be in for a rather fierce and continuing battle with this new director and the Council director as the main protagonists.

Leadership turbulence and the uncertainty of future activity when and if the present leader divests herself of these responsibilities are major problems which remain unresolved.

Overview . The importance of key persons in each of these case studies is striking and even overwhelming. In every case a large number of our informants attributed success to a single person. Other key persons in each case seem to be inspired or energized by that person and dependent to a degree on the continued presence of that person. In each case, however, the formal organizational role of the key person was different. In Midwest it was the dean; at Eastern Private a tenured professor; at Eastern State it was a non-teaching staff person. These key persons also varied considerably in the amount of time they had committed officially and unofficially to the IOA. In Eastern State the staff position was full time but involved the leadership and coordination of all university outreach activity in education. In Eastern Private it was nominally a one third time role but the leader had heavy teaching and advising commitments and a very busy travel and consulting schedule. In Midwestern State the dean assumed the role without compensation as an add-on to a very heavy schedule of activities.

It should also be noted that for the subsystems studied, i.e. the teachers centers in the two state sites and the writing consortium at Eastern Private the same patterns of leadership emerged as crucial factors. Where leadership was strong, highly motivated, and stable the centers thrived. Where there was turn-over, ambivalent and indecisive leadership there was trouble. There has to be someone there to carry the ball.

5.4. RESOURCE CHANGES

Midwestern State. Resource changes were key issues here. Coordinators' meetings focussed on survival; there was an atmosphere of resource scarcity. Foundation support dropped sharply from roughly fifty percent of total coverage of the statewide network to twenty-five percent. These reduced levels of funding had been anticipated but sources of replacement funding had not materialized. There were, however, some funding sources which helped to pick up the slack in funding. State colleges began to provide some in-kind services (facilities, secretarial help, purchase of materials) which did not involve new budget outlays but relied on integrating centers into regular college support. The state education agency began to contract for in-service activities and projects. School districts also continued to provide in-kind services and maintained their earlier budget commitments to the centers. Finally, a mainstay activity of the centers, workshops, were given cost-free by teachers and college-level workshop leaders.

At the center level, the proportion of external center funding dropped sharply as specified in the grant. At the Arcadia center, the state college provided the funds needed to offset the reduction. Also the center continued to acquire material resources which were particularly valuable and upon which county administrators began to rely. (The center provided these knowledge resources free of charge). The Three Rivers center experience in finding funds to offset the reduction in external funds was not as easy as at the Arcadia center. The Three Rivers district balked at providing the requisite funds, noting that the center was less crucial than providing for pupil expenses or other needs which reached one hundred percent of the teaching corps. A compromise solution was the provision of some funding from the district and some funding from North Central University in return for courses organized by the center. All in all, there were some reductions in the hours and services of the Three Rivers center as a result of these fiscal problems.

Eastern State. There were almost no changes in resource levels at OFE or its centers. The amount of money allotted to OFE in the university budget has remained the same since 1975, with no increases for inflation. (In June 1981, all university programs were informed of impending budget cuts--cuts which would decrease the dollar sum in OFE's budget for 1982.)

Arthur County had been contributing less and less to its center, with OFE having to pick up the slack on a small scale. Thus, the coordinator there received a lower salary than other coordinators and had no secretary.)

Neither the Hanburg nor the Cardon center had any major budget or resource increases. The Hanburg center did receive the addition of an assistant coordinator. However, this additional resource was at no extra cost to the university which was already funding an assistant at another Hanburg center prior to 1979.

As one informant pointed out, OFE was run on a shoestring!

Eastern Private. Resources for the IOA, especially contributions from ARI, were not stable. It was unclear whether the original $20,000 from ARI was a continuing obligation. The new director of ARI indicated that he wanted the networking/field operations of the IOA to be self-supporting. The funding future here is unclear.

Also the discontinuation of the "Fellows Option" for school districts indicated a drop in revenue, affecting the IOA's capability to finance their mainstay activity, the fellows program.

An infusion of new federal funds from an NIE grant provided the hope of some fiscal support. However, the tasks delineated in the grant were not core to tasks undertaken by the IOA. Finally, with the assistant leader leaving at the end of 1980-81, the de facto resources which he brought to the IOA would also be ended. On the whole, as of the close of the study, resource levels for the IOA were diminished. With increasing fiscal stringency in even wealthy school districts, the fiscal outlook for the IOA was rather bleak.

Overview. The environment across the nation of increasing fiscal stringency affected the financing of all three cases. However, in the Eastern State and Midwestern State cases, there was evidence of creative responses to budget crises. In the Eastern State situation, there was the creation of new formats which preserved the strength of IOA activities within the parameters of budget cuts and there were economies of scale which also preserved the strength of IOA activities (e.g. consolidation of centers into K-12 grade formats). And in the midwestern state situation, with diminishing resources from the foundation, there was a dependence on new configurations of funding sources (state colleges and the state education agency). Both cases relied upon funding sources' recognition of benefits received from the IOA, often benefits which were perceived as core to the funding source's activities (e.g. provision of material resources or improved delivery of on-site in-service).

Table 5-1 summarizes the percentage of resources provided by school districts, colleges of education, and external sources at the time of IOA founding and at the time of the study's conclusion. It is clear that the Eastern cases represent the greatest degree of shared resourcing on the part of school district and the university.

In the Midwestern case , the university contributed a much larger share than the school districts. With the continuing decline in fiscal resources at universities and in school districts, it will be interesting to observe whether school districts in the midwestern case will increase their percentage of contribution to the IOAs in which they participated. At the time of writing major efforts were under way at these sites to acquire continuing support from the state education department.

Table 5-1 Resources Provided by IOA Members at Founding and in March 1981

Site		Estimates of Coverage (% of 100%) School District	 College of Education/ University	 External
Eastern Private	Revival	54%	46%	--
	Present	36%	36%	27%
Midwest				
IOA as a whole	Founding	15%[1]	35%	50%
	Present	15%	60%	25%
Arcadia Center	Founding	0%	50%	50%
	Present	0%	75%	25%
Three Rivers Center	Founding	0%	50%	50%
	Present	0%	75%	25%
Eastern State				
IOA as a whole	Founding	33%	33%	33%
	Present	40%	60%	--
Hanburg Center	Founding	50%	50%	--
	Present	50%	50%	--
Cardon Center	Founding	50%	50%	--
	Present	50%	50%	--

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[1] Contributions by state office, teachers' association

PART SIX: INTERORGANIZATIONAL RELATIONSHIPS

There are many ways to analyze the development of connections among organizations, and no one approach or theory gives a thoroughly satisfactory picture of the whole. Thus we have preferred to be rather eclectic, focussing on a number of process dimensions. First, we consider the attitudinal dimension, i.e. the extent to which the parties to an arrangement agree and disagree about underlying issues. We title this analysis "consensus and conflict". We then view each arrangement as an example of"bargaining", asking whether each college-school relationship represents an agreement to exchange valued items, either at an explicit or implicit level. The third level of analysis concerns knowledge transfer as such: to what extent does "knowledge transfer" express the essence of these arrangements? Then in a fourth and fifth analytical mode we ask what barriers to and facilitators of effective linkage emerge from the three studies.

6.1. CONSENSUS AND CONFLICT

6.1.1. Midwestern State

Consensus. Looking first at the statewide teacher center network, consensus was strong among members and representatives of the diverse interest groups. Network objectives remained--perhaps deliberately--vague and generous; all parties found their chief concerns addressed therein. Delegates agreed to temper their local needs in the name of network-wide superordinate goals. As a result, resources were equitably distributed. An important trend during these years was the growing link between the state education agency and the network. After initial doubts, state officials came to see the teacher centers as ideal conduits for dissemination. Consensus was also facilitated by decentralization. No central directives went from network staff to local centers. Coordinators resisted attempts to "rationalize" the network by appointing permanent staff. They also reviewed the network decision-making boards as fairly straightforward rubber stamps for proposals they had agreed on among themselves.

At Arcadia, the present phase appeared to be as relatively conflict-free as the initial two years. There was strong goal congruence between the parties constituting the teacher center. Both district administrators and teachers valued a materials-based, practice-focussed approach to in-service, "meaning that it primarily trained future educators and that it was oriented toward community welfare improvement. The center met strongly felt local needs and did it for virtually nothing.

Within the college, there seemed to be little friction. The center had institutional legitimacy; it operated out of a department which had overall responsibility for extension activities. These activities were increasingly viewed as sources of funds and of continuing community support. There began to emerge, however, some initial rumblings of intra-college dissent as the center extended its space and programs into areas others had laid claim to. For instance, there was muted protest from one department over the energy education workshop given by non-specialist staff--the first instance of domain dissensus registered at the site.

While there were domains of consensus of Three Rivers, the situation at this site is best discussed under conflicts.

Conflict. Three issues continued to be the chief source of the few conflicts registered in the network. Table 6-1 summarizes these areas of disagreement. Goal displacement from process consultation to workshop organization plagued coordinators, who saw administration as an unrewarding and distractive task. But they also saw that large-scale workshops were what teachers were requesting and brought in funds. The policy board affiliation had caused the first within-netowrk crisis in the fourth year, when delegates from one teacher center used their experience and--perhaps illegitimate--reelection to increase special project fundings for their district at the expense of two others. The dollar amounts were trivial, but the precedent escaped no one's notice. When money was running out, statewide policy board members began inevitably to make certain their local center was solvent.

There was continuing concern over the perception that the centers were supplanting administrators in the conduct of in-service training. This was especially true of principals. The problem was not acute at Arcadia, where there had been

Table 6-1 Conflicts at Midwestern State Site

PARTIES INVOLVED	ISSUE	HOW RESOLVED	EFFECTS +	EFFECTS -
Statewide Network				
Between individual teacher centers	Policy board affiliation-some centers favored	Rules changed	Problem resolved	Anticipation of future conflict ove related issu
Between teacher centers and school districts	Competition between centers close to one another geographically	Left unresolved	Stimulus to innovate at each center	Residual tension, awkwardness
Between teacher centers and school districts	Fear of centers supplanting principals in in-service training role	Attempts to provide in-service support for principals directly in their schools.	Usually ended in stronger local support	Some principals still bitter
Arcadia Teacher Center				
Arcadia State College and North Central University	Perception by Arcadia of unfair competition for resources	Left latent; Arcadia State proposes own graduate program	Planned extension of Arcadia State programs	Residual bitterness at Arcadia
Arcadia and neighboring teacher centers	Competition for pre-service students and for enrollment at teacher center workshops	Tacit open competitor; initial attempt to demarcate boundaries between centers	Stimulus to improve offerings at center	Ambivalent relationships
Arcadia Teacher center and other departments at Arcadia State College	Emerging dissensus over center's substantive expertise in non-education areas	Not yet crystallized	Sensitization to need for within-college diplomacy	Perceived as "envy"

	sources		grams	
Arcadia and neighboring teacher centers	Competition for pre-service students and for enrollment at teacher center workshops	Tacit open competitor; initial attempt to demarcate boundaries between centers	Stimulus to improve offerings at center	Ambivalent relationships
Arcadia Teacher center and other departments at Arcadia State College	Emerging dissensus over center's substantive expertise in non-education areas	Not yet crystallized	Sensitization to need for within-college diplomacy	Perceived as "envy"
Three Rivers Teacher Center				
Teachers and administrators in Three Rivers area	Utility of maintaining a teacher center	Confrontation-Teachers prevail	Center continued	Worsened teacher-admin relationships
Three Rivers Teacher Center staff and Teachers	Goal incongruence	Center staff accommodate	High extent of center use	Disappointment, overload for coordinator
Three Rivers Teacher Center staff	Role ambiguity, unclear areas of authority	Confronted in one-day retreat and follow-up	More clarification, better communication	Basic issues unresolved

almost no local provisions prior to the center. Three Rivers appeared to turn the corner; principals were now supporting the center more actively and turning to its resources for their in-service needs. Elsewhere, however, there was consensus that "a lot of the principals are against the center," as one coordinator put it.

Finally, some between-center competition began to emerge. Three centers lay in a 60-mile radius of one another, and found themselves recruiting through their newsletter the same diminishing pool of in-service teachers. As enrollments also resulted in fees paid to participating colleges, there was added pressure on the centers to draw a large number of teachers. The same centers that exchanged resource banks and tips of successful activities were competing with one another. There were some initial attempts to draw geographic boundaries, but they were unsuccessful; teachers continued to go either to the center connected to the college at which they had done their pre-service work, or to the center whose offerings were more appealing.

Table 6-1 also shows the parties, issues, resolutions and effects of conflicts at the Arcadia site. There were few, and none appeared to be major. Two of the three conflicts had to do with inter-institutional rivalry. Arcadia State resented what it saw as a "power grab" by North Central, which had adopted many of the Arcadia teacher center formats, then offered post-graduate credits through extension for in-service teachers. Arcadia State had no M.A. certification and could not compete. Here, as elsewhere, the response by center staff was not to protest but rather to outperform competitors. Thus the proposal of an M.A. degree program for elementary education at Arcadia State.

Similarly, Arcadia found itself competing with three nearby teacher centers--at Weston City, Three Rivers and Summy Vale--for teacher enrollments. There was an embryonic attempt at boundary-fixing, but more energy was put into improving offerings at the Arcadia center. Both these conflicts showed the ambivalent relationships among teacher centers who shared ideas, projects and funds as partners in the statewide network yet competed with one another for enrollments.

The final entry for Arcadia in Table 6-1, within-college conflict, shows the darker side of successful institutional expansion by one unit at the (perceived) expense of another.

The situation at Three Rivers was peculiar. There was reasonably strong consensus between the parties as to the activity formats and governance of the teacher center. There were, however, several domains of dissensus. The teacher center did not generate conflicts as much as it served as an amplifier for friction existing before the center was founded; notably between local teachers and administrators. Also, two of the issues could better be described as dilemmas than as disagreements. Table 6-1 shows these issues.

Note in the table that the between-center competition for resources and enrollments that was salient at Arcadia did not surface here. Apparently, the Three Rivers center had a sufficient pool of participants to draw from, even if some went elsewhere. Nor was the prosperity of the center at Three Rivers as bound up with the college of education as was the Arcadia center. But this sliced both ways. The Three Rivers Center was more orphaned from the college of education and was able to call on fewer of its resources rapidly.

The first entry in the table for Three Rivers refers to the recommendation of district adminisrators to close the center; teachers saw the gesture as "anti-teacher" rather than as an evaluation of the center's effectiveness. In this sense, the Three Rivers Center may have been a casualty of friction between two of its participating member groups and became as a result an arena for their disagreements. No noticeable problems of teacher-administrator dis-harmony surfaced at Arcadia.

The second item on the chart for Three Rivers has been mentioned. Some teachers used the center only as a rapid means of getting contract recertification and salary increments. The center staff was not interested in servicing such needs, yet needed the participation of as many local teachers as possible in order to defend itself institutionally. Reflecting on 1980-81, the coordinator said:

> This year we're getting more people who are only coming in for the credit. Maybe we're even turning people into credit-seekers.

This was a dilemma to which the center accommodated by servicing the public while still maintaining offers for what it saw as a more professionally committed audience. In doing this, however, the coordinator got overextended and discouraged. Her likely resignation at the end of 1980-81 may have been a result of attrition over this dilemma.

The final issue refers to problems of role ambiguity and spheres of authority between center staff that were addressed but not resolved, in part for structural reasons (half-time commitments to other jobs).

6.1.2. Eastern State

Consensus. At the college of education there was much less conflict over the role of the IOA than in the early days of its operation. As enrollments declined at the university and as the need for field support increased, departments recognized the importance of the Office of Field Experiences with its direct, centralized linkages to school districts. After Rob Goldman returned to the OFE directorship and initiated administrative changes which more clearly identified OFE as a service rather than a programmatic entity OFE began to play a strong liaison role between the college and the field.

Thus, within the college of education as an organizational unit, a state of domain consensus regarding the role and responsibilities of OFE began to be achieved. One participant contrasted the situation of domain dissensus in the early days of OFE with the OFE of 1980: "OFE is completely defused now. It is not a threat to anybody. Business is booming. Faculty members and the college of education need help in outreach, and that is why OFE survives today." As one faculty member also noted, "Today there is a great rapprochement between OFE and the secondary education department. The period of battling is over."

Within the school districts collaborating with OFE, there was almost no conflict over the role of the university in the district level IOAs. In the five districts which had entered into interorganizational arrangements, the era of declining enrollments and increasing inflation was leading to increased budget cuts. This fiscal climate was much more of a significant factor in examining the stability of the IOA than was degree of domain consensus. At this point in the life cycles of the interorganizational arrangements which comprised OFE, there was definite consensus between OFE and the individual school districts regarding the appropriate turf and responsibilities of each. For instance, the Cardon County School District (in contrast with the attitude of the Martinville School District as characterized by university informants) viewed the scholarly perspective of the college of education and the college's contribution to strengthening their own in-service as great benefits to the district.

Contributing to this consensus was the flexibility of the college of education in responding to the needs of the district. For example, the college paid the total salary for a part-time assistant at the Hanburg center who was responsible for in-service rather than the supervision of student teachers as was customary.

Coordinator style was also an important factor in the building and maintenance of consensus. For example, the Cardon center coordinator was quite effective in working with district personnel and in diagnosing and responding to their needs. One of the characteristics of her style--which reinforces a consensus over a conflict mode of operation--was to integrate the operation of the center with the operations of the district. She did this in many ways ranging from active membership on district committees, participation in district conferences, and always checking with whomever controlled the turf surrounding a particular activity.

Finally, there was no evidence of between center conflict. The OFE director's philosophy, which recognized the individuality of each center as it was shaped by its school district setting and supported the individualized work plans of center coordinators, facilitated a collegial and non-competitive spirit among district level IOA coordinators. For example, where there might theoretically have been some evidence of domain dissensus between the two elementary centers in Hanburg

County, there was, in fact, strong evidence of domain consensus. The two elementary coordinators pooled resources to offer more to their teachers than a single budget could provide. They worked together closely. Each respected the other and his or her own style.

6.1.3. Eastern Private

Consensus. There was considerable consensus at all levels and between the college and the member districts that the revival of the IOA was a positive occurrence. Primarily what was endorsed was the increased activity level which gave the college a sense that something good was being delivered and the schools a sense that they were getting more than their money's worth. This was more than just keeping a tradition alive. Both sides endorsed the idea of greater teacher involvement and involvement of all levels of the school system. There was also a recognition that what was to be done would involve networking, the extensive use of the college faculty, but would not put a major strain on either college or school district resources. In other words, the new activities would be mutually rewarding but would not represent really significant shifts in priorities or resource allocation on either part.

Within the college there was also a consensus which included the leader of the IOA, Alice Loveland, and most of her associates that the IOA should be a knowledge producer of some sort and a contributor to the knowledge building and documentation activity of the college as a whole. The difference here came in the areas of (a) the priority given to research versus service, (b) the extent to which service and research goals were compatible within an applied and collaborative orientation, and (c) the nature of the research to be performed, particularly whether the IOA itself could be a proper focus of study. Because of these undercurrents and for a number of other reasons there were very few tangible knowledge products emerging from the revival effort in the form of publications, theses, handbooks, or whatever in spite of a consensus that such things were desirable. In fact, after a year's leave to work on another project, Loveland felt it necessary to take another leave of a year as a sabbatical to write a book, i.e., to create a knowledge product so as to secure her promotion to full professor. In part what she was saying was that deep involvement in the IOA was incompatible with concentrated scholarly effort.

Conflict. Loveland could generally be described as a harmonizer and partly for this reason when she was around there were few open conflicts and those that arose were resolved quickly through her interventions. When she was gone, however, there were some which came quickly to the surface. These are summarized in Table 6-2. The most serious conflict occurred in the fall of 1978 and involved the old Fellows and Tim Anderson, the interim leader.

At the heart of this conflict was an ownership issue: after a year of frantic effort the Fellows from the previous year felt that the IOA was theirs, or at least their as the custodians of Loveland's flag. Anderson, on the other hand, had an identification with historic version of the IOA about which they knew little; Anderson's IOA was clearly a different animal, more research-oriented, more superintendent-oriented and male. Actually, by his own report, Anderson was merely trying to bring a semblance of order into the very diverse and diffuse notions of change process which the Fellows were engaged in. The Fellows themselves would agree that clarification was desirable but the majority rejected the notion that Anderson should take the lead or even be invovled in such an effort.

The result was extreme unhappiness on the part of the old Fellows who met in secret meetings and made long and frequent calls to Loveland for support. Inadvertently through such behavior the old Fellows made some of the new Fellows feel like outcasts; the new Fellows did not have the same identification with Loveland nor did they share the same disdain of Anderson and his clarification efforts. The conflict was ameliorated by Loveland who flew in for a meeting in December and was ultimately resolved when she returned to the leadership.

The second listed "conflict" in Table 6-2 was really more a confusion than a conflict but it was a preoccupying theme of Fellows meetings over at least a two-year period. It could be summarized in the question, "what is a Fellow supposed to be and do?" The conflictful aspect arose because some Fellows had rather definite ideas about what a Fellow was and was not supposed to do, while others did not and still others took a very open and pragmatic approach which could be expressed as "do whatever you can to be useful in the situation you find yourself in." For a few Fellows, the fellowship represented an opportunity to do field-based research as part of their progress toward the doctoral dissertation. This was clearly frowned upon by several others who felt that a Fellow should be dedicated to service and be sensitive to practitioner needs in a way that precluded this type of research. Actually, there was a kind of emergent self-definition for each Fellow role as each Fellow was placed in a different setting which had its own special problems, challenges, and opportunities. Thus, the collective experience could have been viewed as a kind of experimental incubator for helping roles in school settings, and the frustration at not being able to document the experience in a sharable way is understandable.

As a learning experience for the Fellows it was a bit like being thrown into the water as a way of learning how to swim. For some that was a challenge which they could respond to by swimming, for others there was a mad scramble to the nearest bank, i.e., falling back on familiar roles, dependency on authority figures, reliance on already-established expertise; for still others it probably felt a bit like drowning. From interviews with superintendents, it appears that they never really understood what the Fellow option was all about and took it on as a kind of goodwill gesture to Loveland. As a result field placements were rather casually made and forgotten, having little impact at the district level and hence no institutional support at a later time. The end result was atrophy of the Fellows program as originally conceived by Loveland and the loss of the potential income from member districts to support Fellows activities.

A third muted conflict concerned the focus of attention of the revived IOA. Loveland and all her female Fellows were orientedtoward the teacher level or staff development within the district in support of teachers. Fred Sands and Tim Anderson and probably Frank Innes as members of the administration department and the students whom they managed to place in the Fellows program were more oriented to administrative roles--the principal and the superintendent. This also reflected the prime focus of the historic IOA. Loveland was able to resolve this conflict partially through her ability to relate to different levels and her understanding of sshools and districts as social systems and she endeavored to maintain activities which serviced all levels. As a result the staff was spread extremely thinly and could not really attend very well to the principals' level in particular although efforts in that direction persisted. Probably the most serious negative consequence of this underground conflict was the limitation of involvement of members of the administration department.

Between the IOA and the college there was a somewhat ambivalent relationship. Particularly when Loveland was absent the second time in 1980-81, the IOA was rather isolated from the college through the lack of a spokespersons with real clout in the system. In Loveland's absence higher authorities began to plan different scenarios for the IOA including a more restricted budget and plans for reconfiguring the IOA as the umbrella for all field operations including miscellaneous field research projects. The umbrella model was anathema to Loveland who intervened quickly with the president on one of her return visits to block the move. Nevertheless it seemed likely that the administration would continue to promote plans which would reconfigure the IOA, particularly as long as the IOA continued to be a drain on the resources of the Action Research Institute.

Between the IOA and the districts there were no major visible conflicts after Loveland took over. However, there was a continuing problem in building involvement in the southeast section, where at one time the historic IOA was very popular. One factor here seemed to be distance; members from this area had to travel a bit farther on average than members coming from the two other regions. As a result there was talk at various times of holding regional meetings and of holding meetings at places other than the university-owned mansion which was used up to 1980. Another factor may have been the much earlier dispute over use of the Indicators of Quality which centered on this region; superintendents in this area were reputed to more suspicious of research efforts than in other areas. Finally, and perhaps most significantly there were other resources of a comparable nature in the southeast, in particular a private university with a strong reputation which was developing its own teacher center to serve the area. During the 1979-80 school year, Don Archer made several attempts to enlist interest in a writing consortium in the southeast by forming an alliance with this teacher center, whose new director had been an IOA Fellow the previous year, but his efforts came to no result, less from conflict than from bafflement at the complexities of two overlapping networks and a proposed subnetwork involving two universities and two centers. In any case it was really a minor problem resulting in a lost opportunity of minor concern to the IOA as a whole.

Among the districts there seemed to be few conflicts that appeared on the surface. The IOA was a low-threat, low-cost enterprise which may have been part of its appeal. Located in similar, generally suburban, affluent communities, the districts tended to be interested in the same types of issues, but conflict may arise as there is more involvement with (a) the big city and the inner city and (b) the teacher's union of the big city. These connections were new in the fall of 1980 and were not studied closely.

Table 6-2: Conflicts Related to the IOA

PARTIES INVOLVED	ISSUE	HOW RESOLVED	EFFECTS +	EFFECTS -
Within the IOA Staff				
Old Fellows vs. Interim leadership (fall, 1978)	Acceptance of new leadership during Loveland's first absence	Expectation that Loveland would return, Continuing interim contacts with Loveland Return of Loveland		Weak Fellow connections to rest of Univ. Excessive dependence on AL.
Fellows	Definition of the role of Fellow	Remained unresolved confused for long period. Each discovered own mode.	Evolution of consortia models	Dwindling of the field placement aspect by 1980
IOA "old hands" and Loveland followers	Administrative and total system vs. teacher-classroom focus	Increasing involvement of teachers and instruct staffs. Attempts to cover topics of concern to administrators and teachers. Esta. "principals group"	Districts either pleased or unperturbed	IOA staff overextended Principal's group never gets going well. Fellows stumble over admin. in field efforts Resources never adequately mobilized for revived IOA
Between IOA and College				
IOA staff vs. other faculty and leadership of Action Research Institute	Service vs. research function	Service wins but conflict remains latent	IOA staff morale solidarity high	Isolated from college Vulnerable to academic critique Low status of

				adequately mobilized for revived IOA
Between IOA and College				
IOA staff vs. other faculty and leadership of Action Research Institute	Service vs. research function	Service wins but conflict remains latent	IOA staff morale solidarity high	Isolated from college Vulnerable to academic critique Low status of IOA in college
College President/ ARI director vs. Loveland	Consolidation of college field efforts under revamped IOA	Loveland uses her clout and implied member superintendent clout to get president to reverse position. Conflict remains latent.	Integrity of existing IOA preserved. Possible loss of existing members averted.	Opportunity for expansion and greater involvement lost or put off. Increased tension between IOA leadership and ARI leadership.
Between IOA and School Districts	Recruitment of new members in southeast region and to develop Writing Consortium activity in this region	Failed to gain more than two or three members here	More capacity to relate to other regions	Wasted effort Lost potential resources. Confused turf dispute with teacher center attached to another private university

Among Member Districts

None apparent which related to revived IOA

6.2. BARGAINING AND EXCHANGE

6.2.1. Midwestern State

For the most part, bargaining behavior in the Midwestern State case was more the product of a tacit, often fuzzy set of agreements than a series of codified exchanges. Table 6-3 shows the full set for the statewide network and Arcadia and Three Rivers centers. At the statewide network level, the overarching agreement was between the founders and state and local authorities. The network would provide otherwise unavailable knowledge resources to the districts in return for financing of the enterprise. The network may also have seen an exchange of its knowledge resources for the local exposure to change-accelerating methods which the network was anxious to promote. The bargain struck with state authorities called for the teacher centers to provide rapid and efficient means of delivering new programs and upgrading of instructional skills in return for preferential treatment at the state level when needs for dissemination and training emerged.

The first bargaining issue for Arcadia in Table 6-3 points to the--apparently asymmetric--reciprocity between county administrators and the college, with the former getting a huge storehouse of knowledge resources and free consultation in return for little tangible payment. But the college profits indirectly by bringing in greater revenues, expanding its portion of the potentially lucrative extension services market and by shoring up political support in the area for future use.

Exchanges between the teacher center and area teachers were more subtle. Multiplying contacts between pre-service and in-service teachers helped with placement in a very tight job market. Job placement in turn eased recruitment of new students. Center personnel legitimated their areas of concern,activism or specialization by showing that policy board delegates had approved them. These were, in fact, topics in which area teachers had little expertise and wanted more. Contract

Table 6-3 Bargaining and Exchange Issues at Midwestern State Site

Parties Involved	Exchange	Institutional Consequences	
		College of Education	School Districts
Teacher centers and colleges	Centers provide otherwise unavailable knowledge resources in return for (progressively) full local funding	Gets enrollments revenues; Gains entry into in-service market	Get improved in-service infrastructure
Teacher centers and state educational agency	Centers provide rapid means of dissemination, upgrading in return for financial aid, support from SEA	N/A	Get locally tailored state-disseminated programs, upgrading projects
Teacher center and school district	Center provides free knowledge resources in return for in-kind services (release time, free transportation) from district	Gets revenues from in-service credits; Greater focus on extension activities; Political support from community	No obligation to provide in-service training; No obligation to purchase expensive materials
Teacher center and area teachers	1. Center provides locus to bring children, observe new methods; in return, teachers help with placement of pre-service students	Increases competitive advantage in placement; Eases recruitment of future teachers;	Access to materials and opportunities to observe new practices
	2. Center gets to intervene in areas it considers important (nature study, energy, reading in content areas); in return teachers can order materials, get personel consultations	Growth in priority areas, greater local impact	Wide choice of resources
	3. Center provides certification in return for credit fees, enrollments, enhancing department's status	New source of revenues; Growing materials base and expertise	Nearby, extensive facilities for recertification

	in return for credit fees, enrollments, enhancing department's status	enues; Growing materials base and expertise	, extensive facilities for recertification
Teacher center and college	1. Teacher center brings in extension revenues, strengthens recruitment of new students; in return, college provides space, administrative flexibility, coverage of salaries 2. Center provides materials, facilities, equipment to other college staff in return for within-college support	Competitive advantage over neighboring colleges/universities Improved instructional practice, lower probability of conflict	
Teacher center and school district	District gives control of in-service to center, gets inexpensive, rich knowledge resources	Meets local service/outreach objectives by teaching an in-service program	Significantly improved in-service infrastructure
Teacher center and subset of teachers	Center gives recertification credits in return for participation in center activities	(Indirectly) greater enrollments	Extensive, accessible facilities for teacher recertification
Teacher center and teachers	Teachers give services (workshops) in return for other activities mounted by teacher centers	Meets local service/outreach objectives	Greater peer exchanges, improved instructional capacity from other center events
Teacher center and College of Education	College provides money and institutional backup in return for better access to teachers	Spared organizational burden; recruits and addresses teachers more efficiently	Easier access to university courses and workshops; more "tailored" offers available

recertification could be had through the center conveniently, without major effort, and in areas of real practical concern to teachers. Center staff derived greater resources and expertise and enhanced their institutional position within the college.

Finally, bargaining between, on the one hand, the center and its department chairman, and on the other, the college administration, may have been more out in the open. Several informants on both sides mentioned that the center had brought in revenues, attracted high school seniors and enhanced the prestige of the college.

At Three Rivers, the first exchange, shown in Table 6-3, deals with the transfer of overall authority over in-service (choice of topics, choice of teachers) from the central administration to the teacher center, where district administrators had little direct influence. They approved lists of activities and trainers with little close scrutiny. In return, they got an extensive in-service infrastructure. College staff who taught workshops or courses at the center helped to meet the university's objective of providing services to the local community.

Secondly, teachers hunting for easy ways to get credits also provided support for the center, both verbally and by showing in the enrollment figures that the center was well attended. Often, these enrollments provided revenues to the university when a post-graduate course was concerned. The next item indicates that teachers reciprocated for the workshops, special programs and materials they received from the center by giving workshops themselves and by donating displays and materials. University staff participating in the overall program, thereby showing their commitment to the center and to the general outreach function.

Finally, the university used the center to disseminate new programs (energy education, a new geography curriculum) and training events (multi-cultural education, Saturday workshops), the latter being organized by the center. Training events were tailored better to local needs as a result of consultations between the coordinator and faculty members giving courses about appropriate formats and presentations.

6.2.2. Eastern State

The formalized exchanges between the Office of Field Experiences and each of the school districts were of three basic types: Type I, somewhat equal resource contributions on the part of participating organizations (Bettner, Cardon, and Hanburg County IOAs); Type II, much larger resource contribution on the part of the college of education (Arthur County IOA); and Type III, almost total resource contribution on the part of the college of education (Gantt County IOA).

Type I. Rob Goldman, OFE director, reported that in Bettner, Hanburg and Cardon school districts, the amounts contributed by Eastern State University and by the school systems were perceived as somewhat equal. For example, 1980 Hanburg County report listed its contribution as $59,311,25 and the Eastern State University contribution as $62,913.64 for its three teacher centers. (The money supplied by the university for consultants, conference fees, substitute teachers, represented much of the money that formerly was paid as a stipend to cooperating teachers.)

In the Type I exchange situation the school districts provided half of the funds for coordinators' salaries and the university provided the other half. Coordinators could choose their primary affiliation; in Bettner, Hanburg and Cardon Counties, the coordinators chose the districts which supplied fringe benefits. The counties also provided half-time secretaries, space, and basic equipment/office expenses (desks, telephone, postage, supplies and travel). In exchange, the university provided a graduate assistant (half-time) for each district, conference fees, books, equipment (e.g., videotape), consultant services, and substitute teacher money.

Type II. In this exchange situation typified by the Arthur County IOA, the school system contributed only a very small amount of money to the collaborative effort and showed little commitment to collaboration. The coordinator's salary was paid entirely by the university and, thus, was lower in amount than those of other IOA coordinators. Although it did provide office space for the IOA, the county's only monetary contribution was $75 for every teacher who enrolled in a college of education course. Here, it is interesting to note, that there were many resource acquisition opportunities and much access to alternative knowledge resources. There was also an absence of strong informal linkages between district and college personnel.

Type III. A situation of this type occurred when Gantt County informed OFE that it could no longer afford participation in a traditional teacher center arrangement due to the decline of fiscal resources in the county. Because county representatives expressed a strong interest in continued collaboration with the college of education, a joint task force developed and approved the idea of a professional development center model whereby no direct monetary contribution was required of the school system.

The university contributed many kinds of resources. At the secondary level, the professional development center model involved a school-based supervision team composed of six teachers who received one free credit course at the university. Cooperating teachers received $75 for their effort. Additionally, OFE paid for 18 substitute teachers three or four times a semester so that team leaders could attend team meetings. A secondary education faculty member served as coordinator of the secondary professional development center and was aided by a graduate assistant.

At the elementary level, clinical teams consisting of student teachers, cooperating teachers, a university supervisor, and other school personnel were formed. Cooperating teachers either received free course credit or a stipend from OFE. Reported benefits for the university included "a tremendous amount of (school system) energy and commitment" for "very little financial investment" and "a chance to change (university) programs in response to the field."

For its part, Gantt County contributed its schools as sites for teacher training and its teachers as team members and cooperating teachers. It also provided release time for team teachers to attend meetings and courses. In return, the county received a "window on the talent" and a potent vehicle for in-service and staff development at the school level.

6.2.3. Eastern Private

One of the most puzzling aspects of the Eastern Private IOA is the near absence of bilateral or multilateral exchanges of resources and rewards. For the districts the cost was really quite minor, involving a fee of $750 per year and small amounts of release time for a few teachers. Although all districts visited were facing budget constraints and cutbacks during the years of our fieldwork, for the largest districts or the more affluent the fee was clearly inconsequential. However, for smaller districts--which also happened to be more remote from conference sites--the fee was reported as a factor in non-participation, in some cases the determining factor. Since it was a flat fee at the time of our fieldwork (historically it was based on a certain small amount per pupil), the cost was relatively much more significant for the smallest districts.

The real bargain was at a more subtle level which did not involve finances, credits, specific services or goods. For this arrangement the basic currency was something more like "involvement" or "attention" or "caring." The college needed the schools partly as a matter of credibility and to maintain a sense of relevance. This was not an overpowering drive or a basic survival need, but it was there.

For the schools the need was perhaps for reassurance that they were indeed good schools with high intellectual standards and a continuing striving for excellence which would naturally orient them to the very best colleges and universities in the country as sources of new wisdom. The leader of the IOA, Loveland, said in effect, "Look I can get you the very best people; I'll get you anybody you want at my university and I'll get you world-class scholars and researchers from other places as well." The school districts in return said, "O.K., we will come back and give you the field credibility you need and some access to our schools for your graduate students if you can show us you really want to make this thing work and don't treat us in a perfunctory manner."

Bargaining behavior which reflected these assumptions was only really visible in the interegnum period when Fred Sands nominally presided. Sam Taylor, the savvy young superintendent from Shady Grove, got restless because the old bargain was clearly dead and the institution was lingering on without any new deal being made. (The finance study had been one of the last vestiges of the old bargain, a specific service provided to the districts in exchange for their funds and their provision of access for some research purposes.)

Loveland proposed a new bargain which was rather attractive but vague. She would provide a lot of new activities; she would get teachers involved; she would give on-site service (of an undefined sort)through her fellows. The superintendents said that was fine and they were willing to leave it that way for two or three years. From 1978 through 1980 there were no moves to renegotiate this exchange deal.

At the spring reassessment meeting of May 1981, the superintendents were invited to look at the arrangement again: on the whole they were satisfied but they did express the need for a more quantitative research-oriented thrust which would provide more systematic assessment of needs and concerns. The request seemed to be in line with continuing concerns within the college articulated by George Bern, by some Fellows, and by Loveland, but in different ways. It appeared possible that these stirrings would lead in future years to a new kind of bargain which may have some of the features of the founder's original model.

For the Fellows who provided the working capacity of the revived arrangement the incentives were mostly intangible. To be a part of an important new enterprise where they would learn a lot and which would enrich their professional lives in multiple but indeterminate ways they were willing to work like hell even on tasks (like typing and getting coffee and donuts) which had few intrinsic rewards or merits. The indeterminacy itself was probably an important factor because it allowed individual Fellows to read into the situation whatever they wanted to see in it and to make of it whatever their individual capabilities and interests could make. Those who asked themselves and others "what do I get specifically out of this and what do I have to do in exchange?" were probably the least happy with the arrangement and with their own role.

For the IOA as a whole it seems that the term "bargain" is an inadequate term. It certainly does not describe the way most actors spoke about their involvement. On the other hand it could be argued that the near-absence of explicit bargains or bilaterial arrangements for exchange of rewards is a major factor in the continuing instability of the arrangement, doubts about future funding, and confusion about priorities, roles, and functions.

6.3. KNOWLEDGE TRANSFER

6.3.1. Knowledge Types

For the two teacher centers in the Midwestern State case, Table 6-7 gives the breakdown of the different types of knowledge transmitted via the centers between colleges of education and school districts. In both cases, craft knowledge is far more present than research knowledge. At Arcadia, the materials resource bank "carries" most of the dominant items: craft knowledge, ideas and technical expertise. At Three Rivers, the dominant items flow from the emphasis on teacher-generated and mediated craft knowledge, which results in heavier loadings in the "craft knowledge and "general professional exchange" categories.

Within the Eastern State case, the pattern of knowledge types varied among the teacher centers as Table 6-7 indicates. At the Cardon center, research knowledge and technical expertise were most pervasive, while at the Hanburg center craft knowledge predominated although strong technical expertise knowledge was also present. The ideology and style of the center coordinator contributed to the configuration of knowledge types present at a particular center.

For the Eastern Private case, the typical format for providing knowledge was the workshop at which an acknowledged expert held forth before a group of between 10 and 25 persons from member districts. Table 6-7 presents an analysis of a set of 25 such presentations offered by the IOA during the spring and fall of 1979. We note that about half of these presentations could be described as providing technical expertise of one sort or another and a third provide some sort of research knowledge. The analysis suggests the strongly didactic nature of most meetings; they were not organized as exchanges and for the most part they did not focus on craft knowledge emanating from practitioner experiences. Where craft knowledge was presented, it was usually bolstered by other types of expertise which could be described as "technical."

Table 6-7 Estimated Frequency of Different Knowledge Types Underlying IOA Activity (as Proportion of Total)

	Midwestern State: Arcadia[1]	Midwestern State Three Rivers[1]	Eastern State Hanburg[2]	Eastern State Cardon[2]	The Council[3] Ea. Priv.
Craft knowledge	.39	.58	.25	.35	.20
Ideas	.23	.05	.04	.05	.28
General culture	.19	.05	.00	.00	.20
Technical expertise	.15	.15	.33	.25	.48
General professional exchange	.05	.15	.05	.20	.00
Research knowledge	.01	.02	.33	.10	.36
Inspiration	.00	.00	.00	.05	.20
Other (law)	.00	.00	.00	.00	.04
	1.00	1.00	1.00	1.00	1.00

[1] For Arcadia, knowledge types were computed using the frequencies tabulated from the newsletters. Proportions at Three Rivers were estimated from field notes and documents.

[2] For Hanburg and Cardon, knowledge types were computed from newsletters (only available at Hanburg), documents and data from field notes.

[3] For the Eastern Private site, knowledge types were computed from a list of 25 conference and workshop presentations for spring and fall 1979

A majority of topics were double coded. Most prominent double codes were: "ideas," "general culture," and "inspiration" 3 topics (triple coded)
"craft" and "technical" 3 topics
"technical" and "research" 3 topics

6.3.2. Knowledge Resources and Validation Base

For the Midwestern State case, Table 6-8 helps to get a more conceptually rigorous look at the various products and practices mediated by the Arcadia and Three Rivers teacher centers and at their validation bases. The estimates, however, are less precise. The table takes in the entire range of services performed by the centers both for area schools and for the state college or university.

Looking first at the distribution for Arcadia, commercial products and practices took the lion's share (60 percent). These were the kits, prototype materials (integrated curriculum units) and media in which the center was so rich. Some of these materials had been more rigorously designed and elaborated, with provisions for pre-testing and local adaptations. They figure in the first column, along with the inputs from the college staff (e.g., diagnostic batteries, strategies of teaching) that reached an in-service public, accounting for about 15 percent of the total. Fewer knowledge inputs came from teacher-made materials (10 percent of the total) and from teaching methods and materials devised at the college (15 percent).

In contrast, Three Rivers had fewer commercially developed materials (35 percent) than Arcadia, for reasons of both policy and space. The largest proportion of its resource base (55 percent) consisted of home-grown products--displays and projects donated by local teachers, activity centers put together by the local resource colleague, and the various formats, exercise and add-on materials exchange between teachers during one-time workshops.

Like Arcadia, Three Rivers had a comparatively low quota (10 percent) of R&D based products and practices, most of these coming through the development of materials stocked at the center. Products and practices tested at the college of education were also low (estimated 15 percent of the total), but their very presence is worth noting given the fact that there was no faculty level staff at the Three Rivers center to directly transfer such resources.

Note that differences between Arcadia and Three Rivers reside chiefly in the proportion of home-grown products and practices versus those commercially prepared. This reflects the program objective at Three Rivers of emphasizing craft exchanges between teachers.

The second half of the table shows the validation basis on which the person-mediated activities (workshops, observations, consultations) rested. Because the Arcadia center was so closely tied to the college and because the center's face-to-face activities were mediated heavily by college staff, the proportion of university-based validation is higher than at Three Rivers, where the university played a far less prominent role. However, these proportions are reversed in the next column, reflecting the recourse at Three Rivers to specialists in the community. At Arcadia, these substantive specialists came often from outside the region (e.g., workshops on precision teaching and children's writing). Finally, there was less practitioner-validated knowledge being circulated at Arcadia than at Three Rivers, where teacher-led workshops and "sharing" sessions between practitioners were a core component of the teacher center program.

For the Eastern State case, the forms and validation bases of knowledge resources varied among the teacher centers and were determined by center coordinators. For example at the Hanburg Center an important knowledge resource was the Multi-mode method invented by the coordinator in his previous role as a classroom teacher. Because techniques related to these methods were refined and adapted by student teachers and regular classroom teachers, the validation basis for this knowledge resource was craft or consensual.

Table 6-8 Midwestern State Case: Distribution of Forms and Validations Bases of Knowledge Resources Transmitted by the Arcadia and Three Rivers Teacher Centers (Percent of Total Estimated)

Knowledge Resource Base / Locus	PRODUCTS AND PRACTICES				VALIDATION BASIS		
	Research and Development Based	Developed and Tested at College of Education	Commercially Developed	Home-Grown	Expert-Approved		Craft, Consensual
					University	Other Specialists	
ARCADIA	15%	15%	60%	10%	70%	15%	10%
THREE RIVERS	10%	10%	35%	55%	20%	35%	40%

In contrast, the Cardon coordinator was concerned with transmitting knowledge resources validated by specialists and communicators in research journals. For instance, she was concerned with training student teachers in set induction techniques and in spreading these techniques to classroom teachers.

Products and practices developed at the college of education did not appear frequently at the center. The Eastern State College of Education itself did not have a primary concern with product or practice development.

In the Eastern Private case, research and development and academically established expertise predominated as Table 6-9 suggests. Work by faculty members of the college was featured about a third of the time and thus could not be said to dominate the offerings even though the great majority of presenters were connected to the college.

Table 6-9 Origins of Knowledge Provided[1]

Knowledge Resource Base / Locus	PRODUCTS AND PRACTICES					VALIDATION BASIS [3]		
	Research and Development Based	Developed and Tested at College of Education	Commercially Developed	Home Grown	Non-R&D Sources Outside the College[2]	Expert-Approved		Craft, Consensual[4]
						University	Other Specialists	
EASTERN PRIVATE	32%	28%	8%	8%	32%	60%	36%	12%

[1] Based on 25 presentations, spring and fall 1979

[2] Based on presenters experience	12%
Legislation	4%
Ideas of a great man	4%
Psychoanalytic theory	4%
Statistics	4%
Not clear	4%

[3] Based on 25 presentations, spring and fall 1979

[4] In two cases, craft basis was backed up by other expertise

6.3.3. Knowledge Use

Table 6-11 shows for the Midwestern State case the distribution of uses to which knowledge resources were put by participants at the two teacher centers. In both cases, the practical dominates the theoretical or reflective. Both centers focussed on problem-solving and enrichment of current practices, notably in the provision of workshops or projects allowing teachers to become stronger in weak areas. Arcadia was more active in teacher problem-solving through its consultation mechanisms and slightly more focussed on accelerating instructional practice changes among its population of teachers.

Table 6-11 Midwestern State Case: Use of Knowledge Resources by Teacher Center Participants at Arcadia and Three Rivers (Estimated Percent of Total)

Types of use	Arcadia	Three Rivers
General knowledge	5%	5%
General personal/ professional growth	10%	10%
Improved understanding of work situation	10%	10%
Solving particular problems or class of problems	25%	15%
Reinforcing existing practices	25%	40%
Adopting new practices	25%	20%

There was a sort of schism at Three Rivers. Secondary-level teachers came to events dealing with general topics and professional growth, e.g., workshops on depression, divorce, law, adolescent development. But they used few center resource materials and were not interested in the hands-on, materials-centered workshops in which elementary teachers participated actively, stockpiling all the materials and ideas they could gather in. By contrast, few elementary teachers attended the larger, more broad-guaged workshops, and attempts to set up special topics for elementary teachers on, say, children's cognition, were not successful for the most part. Finally, neither public was looking to make major changes in its classrooms* Their chief concern, in particular elementary teachers, was to expand their repertoire, extend their instructional "bag of tricks" in art, science or reading. Secondary teachers were more theoretical.

For the Eastern State case conclusions regarding the uses of knowledge acquired via the centers are limited due to the constraints of data collection. However, a few examples can summarize and contrast general knowledge use by teacher center participants. At the Cardon center the coordinator reported that cooperating teachers at the center introduced set induction techniques in their classroom teaching as a result of observing student teachers use these techniques.

At the Hanburg Center, the coordinator reported that one third of the teachers in center schools used Multi-mode methods in their classroom teaching and that numerous Hanburg County teachers not assigned to center schools also used these new techniques in their classroom teaching. Utilization of these techniques resulted from observation of student teachers or center graduates successful use of these techniques and/or participation in seminars taught by the coordinator.

In summary, at both sites the practical heavily outweighed the theoretical or the reflective. As the Hanburg coordinator pointed out, knowledge use at both sites tended to result from situations where teachers saw a tool in action.

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*Teachers coming to the Arcadia center were probably not looking to make major changes either, but often found this to be the case as a result of the center's structure, wealth of materials and follow-up mechanisms.

For the Eastern Private case, we used the sample of 25 IOA presentations to infer the type of knowledge use that was expected or urged by the presenter. This analysis is presented in Table 6-12. We have focussed on implied use rather than actual or ultimate use for which our evidence is much more sparse. It would appear that at least 10 (40 percent) could be described as having clear practical application, judging from the number of presentations coded as "problem-solving" or "adoption of new practices." However, since these two categories were frequently double-coded we should not assume that the majority of presentations were so practical. Indeed a majority of the sessions focussed on improved intellectual understanding of some aspect of the work situation or in providing knowledge of general value to the receiver as knowledge.

Table 6-11 Implied Uses of Knowledge Provided*

1. General knowledge	7	28%
2. General personal/professional growth	11	44%
3. Improved understanding of work situation	14	56%
4. Solving a particular problem or class of problems	8	32%
5. Reinforcing existing practices	2	8%
6. Adopting new practices	10	40%
7. Education reform in general	5	25%
8. Assessing needs	1	4%

Again it is evident that most double and triple coding was used in these ratings. Most frequent:

Categories #3,4,6 triple coded 3 times
Categories #1,2,3 triple coded 2 times
Categories #2,3,5 triple coded 2 times
Categories #3,6 double coded 6 times
Categories #2,3 double coded 7 times
Categories #3,4 double coded 9 times

*based on 25 presentations, spring and fall 1979

6.3.4. Linkage Roles and Functions

A final way to examine the knowledge process for the Midwestern State case is by cataloguing the roles performed by teacher center personnel in linking users to knowledge resources. Coordinators played boundary-spanning roles in addition to those surrounding center services. For example, they carried on or facilitated negotiations between the school district and college of education by virtue of having one foot in each universe. Table 6-14 presents a catalogue of linkage functions, together with estimates of levels of investment and perceived success for the Arcadia and Three Rivers teacher centers.

For Arcadia, what leaps out is the difference in relative investments made by the center staff in the college and in the school district. The college was clearly on the delivering end of the knowledge transfer process and the school districts on the receiving end. But the fact that college staff outside the Arcadia center was even a periodic target public is significant.

In contrast, as the table indicates, functions performed for the school district public were heavy in most categories. The fact that the Arcadia center was foremost a materials bank explains the heavy emphasis on resource transforming and delivery. The hands-on, change-accelerating foci of the center account for the prominence of the implementation helping role. The direct training function, performed by center staff, notably in the summer workshops series, was also central. Much of the center's success, in fact, may have stemmed from the multiplicity of linkage roles performed by its staff. Not only was center staff versatile, but it also performed multiple functions for the same set of area teachers who borrowed materials, attended workshops, consulted with individual staff, and brought their pupils in to observe new practices performed by teacher interns, etc. As teachers used the center for these multiple purposes, they (a) treated the center as a core part of their yearly professional activity and (b) engaged more consequentially in practice changes.

At the Three Rivers center, the staff was institutionally nested in a different way than center staff at Arcadia, i.e., outside the college of education and not integrated into staff slots within the school district. Also, the Three Rivers coordinator had far less institutional clout than did the Arcadia coordinator in the college of education and, perhaps by extension, in district administrators' offices. These elements made for a different configuration of linking roles and functions.

Looking again at Table 6-14, one can see that investment by the Three Rivers coordinator and other center staff in the university was practically absent, aside from periodic consultations with college staff on course and program format and the provision of supplementary course materials from the center storehouse. This does not mean to say that the center had no impact on the university, but rather that what impact there was did not result from services provided on request to the university by teacher center staff.

Looking at the school district as users, we can see that the coordinator and her staff at Three Rivers were active in msot areas, but considerably less so than at Arcadia. Some of this was due simply to the amount of time put in; Arcadia had a slightly larger staff and fewer competing claims on its time and these other claims in fact reinforced the accomplishment of tasks at the center. At Three Rivers, a moderate effort went into searching out, bringing in and making available practice-relevant materials in areas where there was a strong demand. Drop-ins drew from this materials bank; the activity centers also came under this category. The heaviest and apparently the most successful investment went into delivering resources based on an assessment of user needs, chiefly through the organization of about 25 one-time workshops on practical aspects of classroom instruction and management.

Other linkage functions accomplished by center staff were performed less often. The consultation function was weaker than at Arcadia, and center staff played more of a middleman,

Table 6-13 Midwestern State Case:

Linkage Functions of Boundary Personnel at Three Rivers and Arcadia

	UNIVERSITY AS USER				SCHOOL DISTRICT/TEACHERS AS USERS			
	Three Rivers		Arcadia State		Three Rivers		Arcadia State	
Functions	Investment by linker	Perceived success (user's judgment)	Investment by linker	Perceived success	Investment by linker	Perceived success	Investment by linker	Perceived success
1. Resource transforming for potential users (packaging, synthesizing, making easily available and usable	none	n.a.	moderate	++	moderate	+	heavy	++
2. Resource delivery: searching, retrieving based on user needs; passing on, informing, explaining	none	n.a.	minor	+	heavy	++	heavy	++
3. Solution giving: advising, encouraging adoption of idea, product as a solution to user problem	minor	+	minor	++	minor	+	moderate-heavy	++
4. Implementation helping: supporting user's efforts to build knowledge into ongoing operations	none	n.a.	minor	+	minor	+	heavy	++
5. Process helping: listening, encouraging, talking through problems	none	n.a.	minor	+	minor-moderate	+	moderate	++
6. Direct training: giving workshops, classes, courses.	n.a.	n.a.			minor-moderate	+	heavy	++

Investment	Perceived Success	
Heavy	++	very successful
Moderate	+	moderately successful
Minor	0	negligible success
None	-	unsuccessful

resource-hunting role than a solution-giving role. Implementation helping was also less frequent, probably as a result of role overload (too many organizational duties) and of a lack of mechanisms either to follow up on a workshop and a drop-in or to put pressure on teachers to follow up, as was done at Arcadia. Similarly, one-on-one consultations, often about major practice change or about serious problems inside the classroom, were less prominent. Center staff had too little time for them, but would have wanted to spend more. And area practitioners, aside from a few dozen elementary school teachers, did not as yet see the center as a place to bring in their core concerns, weaknesses or uncertainties. By the fourth year, however, process helping was beginning to expand beyond this small corps of teachers, largely because of the interpersonal skills of the coordinator. In these instances, process helping usually led to solution-giving.

Finally, Three Rivers center staff did little teaching or workshop animation, and far less than did Arcadia staff. The coordinator taught a one-time workshop in 1979-80 and at least two in 1980-81 in her areas of specialization, early childhood education and reading and language development.

In the Eastern State case, linkage functions were key activities but not the only roles of boundary personnel. Each coordinator had his or her own unique configuration of boundary functions and varying investments in these functions--these are catalogued in Table 6-15. In terms of the university as user, each coordinator's predominent role was resource delivery, passing on information from the field to the college of education. However, their heaviest investment of time was in resource delivery to the school districts and teachers. The Hanburg coordinator, in addition, spent somewhat more time in process helping and solution giving at the individual teacher level than did the Cardon coordinator.

Linkage functions were somewhat different for the OFE director at the level of the IOA as a whole and are summarized in Table 6-16. Here external representation and IOA system building and maintenance became key activities. However,

Table 6-15 Eastern State Case: Linkage Functions of Boundary Personnel at the Cardon and Hanburg Sites

	UNIVERSITY AS USER				SCHOOL DISTRICT/TEACHERS AS USERS			
	Cardon		Hanburg		Cardon		Hanburg	
Functions	Investment by linker	Perceived success (user's judgment)	Investment by linker	Perceived success	Investment by linker	Perceived success	Investment by linker	Perceived success
1. Resource transforming for potential users (packaging, synthesizing, making easily available and usable	none	n.a.	moderate	+	moderate	+	moderate	++
2. Resource delivery: searching, retrieving based on user needs; passing on, informing, explaining	moderate	++	moderate	++	heavy	++	heavy	++
3. Solution giving: advising, encouraging adoption of idea, product as a solution to user problem	none	n.a.	none	n.a.	moderate (district-oriented)	++	heavy (teacher-oriented)	++
4. Implementation helping: supporting user's efforts to build knowledge into ongoing operations	none	n.a.	minor	++	minor	n.d.	heavy	n.d.
5. Process helping: listening, encouraging, talking through problems	minor	n.d.	minor	n.d.	moderate	++	heavy	++
6. Direct training: giving workshops, classes, courses.	none	n.a.	none	n.a.	moderate	+	moderate	+

Investment	Perceived Success	
Heavy	++	very
Moderate	+	moderate
Minor	0	negligible
None	-	unsuccessful
	n.d.	no data

Table 6-16 Eastern State Case: Linkage Functions of OFE Director

Functions	UNIVERSITY AS USER		SCHOOL DISTRICT/TEACHERS AS USERS	
	Investment by linker	Perceived success (users' judgment)	Investment by linker	Perceived success
1. **Resource transforming** for potential users (packaging, synthesizing, making easily available and usable	none		none	
2. **Resource delivery**: searching, retrieving based on user needs; passing on, informing, explaining	heavy	++	heavy	++
3. **Solution giving**: advising, encouraging adoption of idea, product as a solution to user problem	none	n.a.	none	n.a.
4. **Implementation helping**: supporting user's efforts to build knowledge into ongoing operations	none	n.a.	none	n.a.
5. **Process helping**: listening, encouraging, talking through problems	heavy	++	heavy	++
6. **Direct training**: giving workshops, classes, courses.	minor	+	minor	+

Investment	Perceived Success
Heavy	++ very
Moderate	+ moderate
Minor	0 negligible
None	- unsuccessful

Linkage Functions of OFE Director (continued)

Functions	UNIVERSITY AS USER		SCHOOL DISTRICT/TEACHERS AS USERS	
	Investment by linker	Perceived success (users' judgment)	Investment by linker	Perceived success
7. External representation	heavy	++	n.a.	n.a.
8. IOA system building and maintenance	heavy	++	heavy	++
9. Trust generating	moderate	++	moderate	++
10. Need diagnosing	moderate	n.d.	moderate	n.d.

Investment
- Heavy
- Moderate
- Minor
- None

Perceived Success	
++	very
+	moderate
0	negligible
-	unsuccessful
n.d.	no data

the OFE director also had a heavy investment in resource delivery and process helping.

All in all, there was almost no evidence of craft knowledge flow into college of education classrooms (excluding the Multi-Mode Method). Rather, there were flows of information between school districts and the college of education and in the form of feedback on college of education programs and program changes.

Also there were varying patterns of knowledge flows among schools attached to centers. There was a clear pattern of a flow of craft knowledge among Hanburg center schools. There was also a clear pattern of awareness/information knowledge flow among center schools in the Cardon school district.

For the Eastern Private case, the analysis of linkage functions for boundary personnel presented in Table 6-17 reflects the rather lopsided nature of the bulk of the IOA's activities. Both our observations and the activity summaries suggest that the great majority of workshop and conference events were didactic sessions centered on the speaker of the day. Those in attendance were almost entirely from the district members although the Fellows themselves also attended when their schedules permitted and at least two indicated how useful the workshop presentations were to them as a stockpile of ideas and tools which they could then use in their own field work with districts.

The IOA activities were useful to college faculty in two ways; first in giving them some indication of current practitioner needs and interests and second, in guardedly offering some access for field reserach. Generally, faculty did not make much use of the opportunities provided by the IOA either to enrich their course offerings or to make their research more field-relevant. Some expressed the view that the particular set of districts which were most active in the IOA were too affluent to be truly representative of the current edge concerns of education today but they were not likely to take the trouble to find out if this were really the case (in fact, many critical issues were well represented in several if not all the member districts, e.g., declining enrollments, reduced public support for education, falling test scores, minority education, compliance with PL 94-142, etc.).

For IOA leader Alice Loveland and one or two close associates on the faculty this picture was a little different, of course. The collaborative research project which was finally funded in the fall of 1980 represented an opportunity to develop much stronger reciprocal relations with a small subset of districts, some of which happened also to be members of the IOA; however, the extent to which this project was an IOA project was never exactly clear. One of the principal investigators and the prime source of many of the original ideas for the proposal did not want to be interviewed for this case study because he felt he had no connection with the IOA and could not meaningfully comment on its operations. Thus, generally, the IOA was seen as Loveland's thing, and as such the rest of the faculty held back from serious involvement other than responding to her requests for presentations.

On the side of the school districts as users the major input and the most clearly successful input came from the many formal presentations which constituted a type of direct training although it was unaccompanied by any sort of certification or formal crediting. Other linkage functions were performed either through the field work of the Fellows, district by district, or through the Writing Consortium.

The Consortium was a truly collaborative enterprise in which school people played a major contributory role. In addition, there was some effort to sift through and review a number of models for the improved teaching of writing skills; some of these were adaptations from R&D sources, commercial sources, intermediate agencies in the local area, and home-grown procedures from the districts themselves. Experts in writing from the college were also called upon. The Consortium efforts went off in several directions: there was some interest in packaging a new curriculum, particularly in one district; others preferred a rather eclectic approach; a resource bank was created; two districts collaborated on a joint program. It was generally considered a success although not all spinoffs were equally succesful.

Resource delivery, solution giving, help on implementation, and process helping were all generally a part of the repertoire of the Fellows as field agents of the IOA but as noted elsewhere in this text they played out in very different ways, each Fellow shaping a unique role, and some being much more successful than others. Those who had absorbed the Loveland course at the college should have been prepared, intellectually at least, for all four functions and particularly the last, but few were able to carry out a pure process-helping role, in part because the conditions of entry into sites did not set them up with these expectations.

Table 6-17 Eastern Private Case
Linkage Functions of Boundary Personnel[1]

Functions	UNIVERSITY AS USER		SCHOOL DISTRICT/TEACHERS AS USERS	
	Investment by linker	Success	Investment by linker	Success
1. Resource transforming for potential users (packaging, synthesizing, making easily available and usable	None	N.A.	Minor[2]	++
2. Resource delivery: searching, retrieving based on user needs; passing on, informing, explaining	Minor	+	Moderate[3]	+
3. Solution giving: advising, encouraging adoption of idea, product as a solution to user problem	None	N.A.	Moderate	+
4. Implementation helping: supporting user's efforts to build knowledge into ongoing operations	Minor	0/+	Moderate[3]	+
5. Process helping: listening, encouraging, talking through problems	None	N.A.	Moderate[3]	0
6. Direct training: giving workshops, classes, courses.	None	N.A.	Major	++

Investment
Heavy
Moderate
Minor
None

Perceived Success

++	very successful
+	moderate success
0	negligible success
-	unsuccessful

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[1] Estimates for this table based on analysis of IOA data rather than judgments from users at the site.

[2] Primarily in Writing Consortium.

[3] Primarily through work of Fellows in districts.

6.4 BARRIERS

6.4.1. Midwestern State

Barriers for the Arcadia and Three Rivers sites were somewhat different. At the Arcadia site there of the four early barriers--skepticism on the part of state college staff, initial dispersion of activities, and gaps in the resource bank--were corrected by the time of this study. One initial barrier remained, that of lower participation of secondary school teachers. And another, domain dissensus between college departments and center staff began to emerge.

Unlike the Arcadia site, most of the early barriers at the Three Rivers site were still present with two exceptions: leadership had improved dramatically and exalted expectations for the center had faded. The remaining barriers were: a lack of ownership on the part of the school district and college of education, low participation of secondary school teachers; budget constraints at the school district level; poor facilities for the teacher center; a system of decentralized center management; high staff turnover for the center; role overload on the coordinator; and low perceived homophily between center staff and school people. These barriers hamper institutionalization of a center, lower extent of use, and lower leadership stability and institutionalization.

6.4.2. Eastern State

Barriers at the Eastern State site differed among the various IOAs which constituted the IOA as a whole. At the Cardon site, there were three main barriers, one of which appeared at the time of the study. Increasing fiscal stringency at both the university and the school district in 1981 contributed to an instability in funding. Continuing barriers were potential turf and power issues between coordinator and school people--barriers softened by current coordinator style. Access to alternative knowledge sources which might weaken commitment to the IOA did not serve as an impenetrable barrier. Here trust and respect generated by a history of collaboration/linkages obviated this barrier.

The fiscal stringency barrier also operated at the Hanburg IOA leading to a sense of instability of funding. Turning to the three other IOA sites, the following barriers were sometimes in evidence: lack of homophily between key persons leading to conflict and inhibition of collaborative behavior; narrow role perception on the part of an IOA coordinator resulting in hampered flexibility in meeting district needs; few linkages between a coordinator and university and/or district personnel contributing to little awareness of resource acquisition opportunities; lack of congruence between organizational configurations causing difficulty in implementing collaboration; differing reward systems provided disincentives for collaborative behavior; and domain dissensus served as a disincentive for participation/ maintenance of an IOA.

6.4.3. Eastern Private

At the eastern private site there were a number of barriers. The reward system at the university with its emphasis on publications kept the IOA marginal and isolated. Also the rewards of IOA membership for school people were not great, leading to shaky, tepid support. In the area of linkages, weak university-school linkages (which were further weakened when Fellow field assignments were dropped) and weak university-IOA linkages (which were substantially weakened with the absense of the charismatic IOA leader, Alice Loveland) contributed to lower support from school district and university constituencies.

Another set of barriers contributing to weak support for the IOA was the lack of perceived homophily between male professors (especially in the administration department) or male superintendents and the Fellows who were seen as an in-group of activist women.

Several barriers developed as a result of changes in the IOA over the years. There was a fading of the excitement of a new enterprise and a sense on the part of some of the most involved persons that they were on the verge of burn-out. Additionally Loveland was absent, her absence led to a sapping of energy of IOA staff as well as dissension among fellows and staff.

Finally, a reduction in funds resulting from reduced commitment of the university and elimination of the Fellows field placement option weakened the capacity of the IOA. Further weakening its capacity and support was the relative strength of alternative resource centers within the IOA's region.

Overview. Although most barriers were specific to subsites, there were a number of similarities across either two or three cases. First, lack of perceived homophily between key persons served as a deterrent to collaborative behavior. Second, domain dissensus acted as a disincentive for participation/maintenance of an IOA. Thirdly, differing reward among organizations participating in the IOA led to a lack of consistent reinforcement for collaborative endeavors. Fourthly, few or weak linkages between representatives of participating organizations allowed for either little awareness of resource acquisition opportunities or minimal potential for IOA support.

Finally, the increased fiscal stringency on the part of school districts in 1981 was evident in each of the cases. This reduction in school district funds, and in two of the three cases, in college of education funds, contributed to an instability in IOA funding.

6.5 FACILITATORS

6.5.1. Midwestern State

Facilitating factors at the Midwestern State site can be classified according to characteristics of participating organizations, characteristics of the teacher center, and characteristics of teacher center staff. At the Arcadia subsite, the small scale of the site led to a rapidity of decision making which resulted in a greater variety of activities and responsiveness to user needs. There was also a priority of service objectives at the college of education which was congruent with the service orientation of the IOA and strengthened university support for the IOA. Turning to teacher center operations and facilities, a large materials bank (craft-usable resource base) combined with low access to alternative knowledge resources led to more extensive use and a greater degree of teacher dependency on the center. These factors combined with the following three teacher center staff characteristics facilitated IOA usage and support: (1) coordinator homophily with college of education personnel and with teacher concern for the practical (strengthened by coordinator ideology and responsiveness); (2) coordinator familiarity with the resource base; and (3) coordinator personalism, warmth, and affective closeness.

Similarly, at the Three Rivers site, the college of education gave priority to a service objective, thus increasing support for the service orientation of the IOA. And the responsiveness and energy of the coordinator increased support for the IOA, the number of IOA objectives, and, ultimately, the extent of use by participating organizations. Lastly, the broad appeal of the IOA to different client groups also contributed to increased support and extent of use by participating organizations.

6.5.2. Eastern State

Facilitating factors at the Eastern State site can also be classified according to characteristics of participating organizations, the teacher center, and staff. At the Cardon sub-site, both the multiplexity of school-university linkages and the strong formal and informal linkages contributed to an awareness of needs of participating organizations and a concomitant perception of benefits as well as to the stability of the arrangement. Also linkage-related, the stability of key personnel within participating organizations aided the stability of support for the IOA and combined with a history of collaboration to aid the development of trust, respect and the growth of the IOA. A situation of domain consensus also facilitated the support and maintenance of the IOA. One sub-site specific characteristic, the detailed, written codification of the IOA, strengthened the routinization and regularization of linkages.

Again the homophily and responsiveness of the coordinator aided support for the IOA and led to a variety of objectives and activities. These varied objectives and activities. These varied objectives and activities, in turn, contributed to the stability of the IOA. Lastly, the loose coupling of the teacher center with participating organizations aided in the flexibility of the coordinator and contributed to the autonomy/responsiveness of the coordinator.

Facilitating factors were quite similar at the Hanburg site. Strong formal and informal linkages raised participating organizations' awareness of one other's needs and added to support for the IOA. The stability of key personnel in participating organizations strengthened the continuation of support and combined with a history of collaboration to aid in the development of trust, respect, and growth of the IOA.

Turning to characteristics of the Hanburg coordinator and center, the homophily ideology and responsiveness of the coordinator aided support for the IOA and led to a variety of objectives and activities. These varied objectives and activities, just as at the Cardon Center, contributed to the stability and growth of the IOA. Another factor contributing to the stability of the IOA was the goal changes over time in response to changes in the environment. Again, loose coupling aided in the flexibility of the coordinator and contributed to the autonomy of the coordinator. Finally, support of the state-wide IOA leader contributed to the effectiveness of the coordinator and the center.

6.5.3. Eastern Private

At the Eastern Private site, the proximity of districts to one another and to the central IOA conference site as well as the on-site presence of Fellows strengthened formal and informal linkages, led to greater awareness of school district needs, and allowed for valid and rapid feedback on the performance of the IOA in its various activities.

As in the other sites, linkage-related characteristics facilitated the operation and stability of IOA. The extensive personal network of the IOA leader combined with the networks of IOA staff (the Fellows) to strengthen and maintain support for the IOA. Less important were the linkages of the "old boys network" of the old IOA; several representatives (superintendents) mentioned that these linkages were less solvent for them now. Also, similar to facilitating factors in the two other cases were the characteristics of the IOA leader. At the Eastern Private site, the energy, openness, empathy, and homophily of IOA staff with the districts they serviced contributed to staff responsiveness as well as to support for the IOA.

Overview. There are many more similarities across cases among facilitating factors than among barriers. A striking finding is the similarity of groups of facilitating factors across both the state university-linked IOAs and the private university-based IOA.

The first group of facilitating factors occurring across cases are linkage related factors. The specific pattern of linkages is different in each IOA; however the presence of formal and informal linkages seems to facilitate the formation and maintenance of an IOA. These linkages appear to lead to an awareness of the needs of participating organizations as well as to a perception of benefits from IOA participation.

The second group of factors are those related to the characteristics of IOA staff: homophily with representatives of participating organizations; responsiveness and ideology of coordinator.

Additional similarities occur across the two state-univerisity related IOAs. Domain consensus regarding the appropriate roles of organizations participating in the IOA facilitated the formation and maintenance of the IOA. Stability of key personnel also aided continuation of support for the IOA. The decentralized nature of the center--in both cases--loosely coupled to the administration of participating organizations--contributed to the flexibility and coordinator responsiveness. Finally congruence between the service orientation of public colleges of education and the service orientation of the teacher center contributed to the formation, maintenance and, ultimately, institutionalization of IOAs which could readily respond to the needs of practitioners in their areas.

PART SEVEN: OUTCOMES

7.1 OUTCOMES ANALYSIS: OVERVIEW OF CATEGORIES AND GENERAL FINDINGS

Assessment of the outcomes of an inter-organizational arrangement is an extremely complex task both conceptually and methodologically. First of all there are at least three levels at which outcome considerations are relevant: the individual level; the organizational level; and the arrangement level. Furthermore, at the individual and organizational levels we can expect rather different types of outcomes depending on the type of organization and the role of the individual. Even at the arrangement level there are really two levels of analysis for two of our three sites: first there is the state-wide arrangement and then there is the arrangement involving specific teacher centers connecting to schools and school districts and in some cases also to a community college. The outcomes by level thus breaks down as indicated in the following table.

Table 7-1 LEVELS OF OUTCOME ANALYSIS

Organization and Arrangement Level	Individual Level
The Arrangement, itself (IOA)	
As a Whole	leader/coordinator
Sub-sites (e.g. teacher center or community college networks)	staff
University/College	
As a Whole	administrators
Department	faculty members
Field Unit connecting to the IOA	student teachers/graduate students
School District	
As a Whole	administrators
School Building	support staff
Community	teachers (students)

For each of the three major sites the breakdown was slightly different. Thus there were no sub-sites in the Eastern Private case and there turned out to be more than one higher education institution involved in the Midwestern case.

In spite of this diversity of levels we were able to develop a category system for specific outcomes which could be used as a coding procedure regardless of level. There were five major categories as follows:

1. Power and status changes
2. Linkage changes
3. Capacity maintenance and growth
4. Practice improvement
5. Institutionalization.

7.1.1 Enhancements of Power and Status as an Outcome Category

Any new institutional entity represents a potential shift in the social force field and such changes are often sought by individuals in part because they promise some enhancement in standing among colleagues or some empowerment to achieve desired goals. Many such shifts were observed and reported among all three IOAs.

7.1.2 New or Strengthened Linkages as an Outcome Category

As illustrated in Part One, each IOA represents a new set of connections between people and institutions. If such connections are maintained they can also be considered a significant outcome which changes the social landscape. We were especially concerned, of course, to note new connections which would probably have not come into existence if the IOA had not been there as a facilitating mechanism. Also considered is the strengthening of existing connections and the breaking or weakening of other connections that might happen under the new arrangement. Very significant changes in linkage were observed at all levels in all three IOAs. These linkages, while being outcomes of interest in themselves also lead to other outcomes, e.g. the acquisition or exchange of knowledge, skills, fiscal resources, materials, and personnel. These outcomes are covered under our schema in other categories. Nevertheless, the continuance of a link which, for example, was the conduit for new knowledge acquisition, suggests an increased capacity to acquire more such knowledge in the future.

7.1.3 Growth, Maintenance, and Capacity Building as Outcome Categories

This is probably our largest and most complex outcome domain. In our analytic schema we viewed both individuals and organizations as systems requiring continuing input, throughput activity, and output to maintain themselves in some sort of steady state and to grow. At the individual level all three represented significant educational opportunities to those who had access to them. Every imaginable topic of concern to educators was covered and in some cases college credit toward various advanced degrees was included. For the staff of the IOAs, themselves, an opportunity was provided to explore entirely new roles and functions. At the organizational level they represented a significant new channel for staff recruitment for the districts and student recruitment for the universities as well as representing an expanded capacity for teaching on both sides. One capacity which we looked for but did not find was in the area of knowledge building in the "disciplined inquiry" or "research and development" sense. A traditional concept of university use or exploitation of school districts as site for faculty or student research was not observed to any significant degree in any of the sites.

7.1.4 Improvements in Educational Practices as an Outcome Category

Practice improvement was a prominent stated goal of all three IOAs and specific citings of such improvements were legion, especially at the teacher and school levels. Generally we listed specific mentions of the adoption of new skills, curricula, and procedures in teaching, administration, etc. as "practice improvements". If the change seemed to be one of fundamental orientation or general growth or improved problem-solving , goal setting, and need assessing, we would classify the item under capacity growth and maintenance. Obviously, if many specific improvements are reported there is also an implication of the latter also.

In addition to practice improvements we noted changes in knowledge, attitudes, and values which might subsequently lead to such improvements or contribute to capacity and growth. One heading that was employed in the more detailed analysis was "stockpiling", i.e. the building up of a reservoir or backlog of knowledge, ideas, materials, or other resources which might subsequently be used in a variety of ways.

7.1.5 Institutionalization as a Category of Outcomes

Finally, we were very concerned about the issue of institutionalization, both as applied to specific changes at the district and university levels, and particularly as concerns the arrangement, itself. Assuming that the balance of outcomes of an IOA are substantially positive, which they appear to be in all three sites, how can they be retained over time as a part of the educational landscape.. To explore this issue we employed a modified version of some of Robert Yin's categories of "routinization." These are identified in the Institutionalization tables which are included with each case description. While all three sites were purposely chosen because of their fairly extended survival record which did not seem to depend at least directly on federal funding, we feel that a number of institutionalization issues remain unresolved in at least two of the sites. To do their job well with significant outcomes for a number of users, IOAs need support which is continuing and reasonably substantial.

SITE-BY-SITE ANALYSIS OF OUTCOMES

It is probably neither meaningful nor fair to compare these three IOAs in terms of the value of their outcomes or even in terms of the numbers served. What we can illustrate is the fact that each was quite successful on a number of criteria. In the following presentation a synopsis of outcomes will be given for each site and sub-site in turn rather than clustering and summarizing by outcome category. We feel that this type of presentation does better justice to the integrity of the site and provides a more holistic understanding of the kinds of things that did result from the various networking efforts and why.

7.2 OUTCOMES SUMMARY: EASTERN PRIVATE CASE: "THE COUNCIL"

7.2.1 Status and Power Outcomes.

From its earliest days, "status" was a salient aspect of this IOA. It represented what could be described as the "elite" of public education in its region and even nationally, and the University and its Education School were generally considered as national leaders. Thus association with both the university and the IOA were typically considered as status-enhancing and-maintaining for all concerned. Indeed, the logic of the founder was that these were to be "lighthouse" schools, the avant-garde which could show the way for the other districts across the country on what was innovative, high-quality educational practice. By the mid-1970's some of this luster had tarnished but not all, and the university connection remained an important drawing card for some.

7.2.2 New and Strengthened Linkages as Outcomes of The Council Revival

There is no question that the revival lead to a renewal of many individual connections and the establishment of many new ones at the individual level. While the old IOA had long been known as a kind of "old boys network" for superintendents, the revived network deliberately sought and succeeded in establishing linkages at the teacher level and the principle level as well as among district staff level persons in various roles. On the other hand, this IOA has failed conspicuously in several attempts to expand the network beyond the original core of four affluent suburban counties, either to more remote suburban and rural areas or to the much poorer urban environments which abound in the immediate vicinity of the university.

7.2.3 Maintenance, Growth and Capacity as Outcomes

This IOA, in spite of the outpouring of activity generated in the revival, can not be viewed as having had a very great effect on either the maintenance or the growth of any of its member districts. Most of the resources it provides are also provided by other network-like arrangements and service agencies which abound in the region. Thus it is generally regarded by superintendents as pleasant, worthwhile, but rather inconsequential among the rather rich and varied assortment of in-service and linking opportunities available to them. There is no district for which it can be said to provide a service which is either essential or one which cannot be provided from some other source.

Likewise, few university informants other than the IOA staff, itself, are likely to rate the IOA in its present configuration as an essential aspect of the university, certainly not in a survival sense. It is not seen as serving an essential linking role since most faculty have access to schools through diverse channels. No department relies to a large degree on these districts either for recruitment, or pre-service training sites, or research sites, or graduate placement sites, partly because the University (justifiably) sees itself as connected to a national rather than a local constituency.

For the individual graduate students who were involved as fellows, however, it is quite a different story. IOA-involvement gave them diverse opportunities to grow in a number of different directions: to understand other educational settings, to learn the role of linker or change agent through experiencing it, to compare experiences of challenge, frustration, and growth with each other. In many cases the initial fellow experience lead to other opportunities including development of spin-off networks such as the writing consortium, taking on linking roles in other settings, developing very solid ties to each other as a peer network and developing extended ties to educators in the region at all levels as well as to nationally-known experts recruited for various workshops and conferences.

When comparing the revived IOA with its historic version, we see a clear shift in goals toward an active service orientation and an attempt to move down into the ranks of the district to get more involvement from principals and teachers. It also represents a muting of the research role. For the districts and their involved staffs, however, this IOA was rarely likely to have the kind of impact that would result in goal shifts, nor do we see goal shifting reflected in the over-all stance of the university.

Once again, goal shifting as an outcome was most clearly observed among the fellows, many of whom came out of their experience with a strong desire to work further as change agents and network-builders.

For the school districts who are most involved, this IOA provides a varied and continuing input of high quality expertise available to all staff levels through the many conferences and workshops that are put on. The high attendance levels and enthusiastic testimonials provided for most of these events suggests that they represent a significantly increased knowledge acquisition capacity. Inter-collegial contacts across districts and personal contacts with university professors can greatly expand the potential resource network that districts and individuals can draw upon.

It is less clear that the IOA is capacity-building from the university's point of view. Academics outside the IOA group tend to view the activities as an unreciprocated gift of knowledge or service and thus something that depletes resources. Even the IOA staff themselves sometimes speak of a kind of depletion or exhaustion from what seems like a continuing whirlwind of meetings, arrangements, recruitments, conferences, and visits.

The fellows program may represent the clearest effort to improve district problem-solving capacity through providing process expertise on-site. There is evidence that this was the result at some sites. For the most part, however, fellows were not able to gain acceptance as general capacity-builders but rather fitted in as the locals saw fit to roles or tasks which locals could understand and felt were needed.

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7.2.4 Practice Improvements Resulting from Council Activities.

This IOA generated few specific examples of practice improvements which had either dramatic or long term impact. This is not so much because such outcomes were not there but because the saliency of IOA impacts was low compared to those coming from other plausible sources. Probably the strongest impact was the establishment of a magnet school in one district which attempted to follow Bloom's "Mastery Learning" model. In this case the superintendent had attended an IOA-sponsored conference at which Bloom spoke and was duly impressed. The superintendent was already under pressure to establish another magnet school, having previously started one following a model developed by another prestigious and nearby college of education. However, in proceeding along this tack he made minimal use of the IOA's resources. Thus, the IOAs contribution was a "catalytic pinprick."

7.2.5 Stockpiling Knowledge: A Prominent Outcome in the Eastern Private

Of our three cases, this IOA probably best represents the stockpiling type of outcome. In other words, what we have here, particularly represented in the many workshops and conferences, is a continuous outpouring of knowledge from sources external to and perhaps most expert than what the school districts can provide for themselves. In the scheduling of content for these inputs there is a loosely structured effort to first sense "needs" or concerns that are current generally in member districts. But such need resource matching is rather general and ad hoc. Hence, for any one conference attendee, the use opportunity is not likely to be immediate.

7.2.6 Institutionalization as an Issue for The Council: Eastern Private

Major credit must be given to any interorganizational arrangement which has been able to survive intact with continuing visible impacts for over 40 years. Much of the credit goes to the founder and his immediate successor, through whose efforts "routinization" took place. It began with the promotion of a concept of educational practice improvement through collaborative research, development, and sharing, with the university playing critical coordinative, control, knowledge input, and synthesis roles. The IOA became reified through a standard fee structure for membership, bi-annual conferences and numerous task forces and data collection, write-up, and feed-back exercises which involved the coordinated efforts of school district personnel, graduate students and faculty of the university. The historic growth, diffusion, and stabilization of this IOA is an important case study for the students of educational practice improvement. However, it was not the focal interest of this project. We began to study this arrangement after it had atrophied and then been revived in a somewhat different form in response to contemporary educational needs and environments.

In its present form, institutionalization appears to be somewhat tenuous. Funding remains but is continuously threatened by intermittent disinterest and competing priorities both within the districts and within the university. In its new form there appears to be less codification of procedures and less clarity regarding the scope and limits of activity. Within the university there is a commitment to continuation of field services in something like the present form but the level and consistency of that commitment is not clear. On the school district side, the commitment goes on from year to year with no assurance that any particular district is seriously committed in the long term.

TABLE 7-2 DEGREE OF INSTITUTIONALIZATION: EASTERN PRIVATE UNIVERSITY IOA

Supporting Conditions	Eastern Private University IOA
Considered a core function	
• within local schools	Weak
• within the college/university department or faculty	Partly Present
Used on a regular or daily basis	Present
Provides benefits/payoffs to:	
• school administrators	Present
• teachers	Present
• university staff	Weak
• Teacher Center staff	Present
Outperforms or eliminates competing practices	Partly Present
Receives support from:	
• district administrators	Present
• school building admins.	d.k.
• college/university admins. and deans	Weak
• state-level administrators	N/A
Passage Completion	
Achieves stable funding source	Partly Present
Functions performed are certified by:	
• school authorities	Absent
• college/university auths.	Absent
Supply and maintenance provided for	Partly Present
Organizational status is formally established in regulations	
• within school district	Weak
• within university	Partly Present
Cycle Survival	
Survives annual budget cycles	Present
Survives departure or introduction of new staff	Weak
Achieves widespread use	
• in school district	Weak
• in department, faculty of university/college	Weak
• in State	Weak

d.k. = don't know

7.3 OUTCOMES SUMMARY: EASTERN STATE

7.3.1 Power and Status Outcomes

At Eastern State University the initial establishment of the interorganizational arrangement resulted in a loss of power for the university departments (and their faculty) which previously possessed responsibility for student teacher supervision. The departments also lost direct access to information flow from the school systems. This shift of power to the Office of Field Experiences (OFE) unit led to considerable conflict which was somewhat resolved by the passing of time, naming some departmental liaisons to OFE, and by responding with flexibility to departmental needs on the part of the current OFE Director.

At the county level, teachers in both counties received recognition and a heightened sense of professionalism as a result of affiliation with the teacher center. However, this status enhancement outcome was much greater on the part of Hanburg County elementary teachers who exhibited a sense of comradeship and pride in their craft-generated knowledge.

Turning to the Hanburg County organization, no data was available regarding that organization's status enhancement. The somewhat rural Cardon County Office did indicate some status enhancement through the IOA bringing the county office "into the mainstream of what is going on in education." Finally, the college of education organization gained in power and status through the IOA's guarantee of field sites and field access.

In summary, no organization as a whole (the University or the county or the schools) lost power or status as a result of the interorganizational arrangement. Rather, the IOA allowed for various positive outcomes, including those discussed below, to accrue to participating organizations*, thus adding to their respective power.

7.3.2 Linkages as Outcomes in the Eastern State Case

The IOA structures described earlier in this report provide the linkages for access to university and district/school resources. At both the individual and organizational levels, linkage outcomes included increased numbers of linkages. In Hanburg County the university organization was formally linked to the district organization through the teacher center coordinators. Contrastingly, in the Cardon County IOA additional linkages occurred through teacher, principal, and college of education representatives to policy and operating boards. It is interesting to note that informal linkages existed prior to the initiation of the IOAs and continued to exist between university and schools people in both settings. The formalization of structures of access served to routinize and strengthen many of these informal linkages as well as to provide channels leading to outcomes discussed below.

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*Where a county did lose power as a result of an interorganizational arrangement, it withdrew from the IOA. In Martinville County (originally the sight of strong teacher centers), the county withdrew from the IOA with little advance notice. Here, according to OFE-related informants, the county did not want to surrender for long the sole control of its staff development programs. Naturally, a number of factors including fiscal constraints also contributed to the demise of the centers.

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7.3.3 Maintenance, Growth and Capacity as Outcomes : Eastern State Case

The initial outcomes of these IOAs were to enhance recruitment selection of new teachers ("provide a window on the talent") on the part of county and school organizations and to provide stable sites for student teacher placement on the part of the university organization. Related to these outcomes were the exchange of fiscal/administrative resources to support on-site student teacher training: the county organization provided office space and equipment on-site as well as a part-time secretary while the university provided a graduate assistant, funds, and courses. Both organizations shared the salary and selection of an on-site coordinator.

Along with these outcomes came other outcomes which over time, became more and more important. In-service opportunities were provided for staff leading in Hanburg County to development of a support system and esprit de corps for teachers. There was a changed organizational climate at the Hanburg School building level: the production norm shifted "to another level, a more intellectual level" with "more sharing" and "more freedom to talk about ideas and dissent." Similarly, there was change in Cardon County at the district organization level with the IOA's provision of "help not to lose perspective" and with "internalization of a scholarly perspective."

Against the backdrop of lessening needs for new teachers, both IOAs (as well as the IOA as a whole) have begun to focus more and more on in-service offerings tailored to the needs of the specific county and school organizations. In turn, the university and its faculty have benefitted through a locus for on-site graduate programs (and the concomitant increase in enrollments) as well as for field research (and the concomitant ready-made instrument for access). A faculty member reported that when she was writing a grant proposal, the Cardon Teacher Center Coordinator collected approximately four letters of support from schools/district people in less than an hour! Additionally, several publications and dissertations have come from joint Center faculty and school system efforts.

The IOAs in both counties have contributed to other changes in the capacities of participating individuals and organizations. Teachers have enrolled in courses, workshops, and seminars and/or have acquired books, materials/and lamination. They have also had access to conference fees, professional associations, and intervisitations; they have received support for research in a group setting (Cardon County) and a one-on-one setting (Hanburg County). Student teachers have developed classroom skills in an environment characterized by support at the school building level and development of an esprit de corps. They have had access to more than one model. Related to center placement of student teachers was the flexibility of coordinators to make placements and to trouble-shoot on site - a dual benefit to both county and OFE organizations.

Turning to the organizational level, both Cardon and Hanburg Counties had immediate access to information through the on-site coordinators. The schools and district received support for building and county level in-service. In Hanburg County, there was a coordinator who was perceived by principals as being able to help teachers whom administrators could not reach. In Cardon County, there was a coordinator who was perceived by district personnel as being able to problem solve through identification of appropriate resources and through participation herself on district problem-solving committees. (The bridging serial in Cardon County

Because of Hanburg County's teacher-centered focus, there also was a greater emphasis on craft knowledge at that site. Regular newsletters contained primarily craft knowledge and ideas/techniques submitted by classroom teachers. The Hanburg coordinator observed that 300 county classrooms used the "think-links" technique he originated in his classroom teaching, related to theory, and disseminated via a network of student cooperating teachers, and teachers enrolled in his classes/seminars.*

On a small scale, the Cardon County coordinator reported that she observed a change in cooperating teachers classroom teaching due to her work on set induction with student teachers (which originated in a journal article.)

There were some interesting non-outcomes related to practice improvement that require further discussion. Focussed discussions with Cardon County teachers and observations at the Center there revealed heavy teacher usage of the Center in terms of materials and equipment and little usage of the Center in terms of problem solution efforts or conversations among teachers who did not supervise student teachers. Teachers in the Cardon County IOA primarily viewed the center as a place to laminate or acquire materials and to help with student teachers. Further, teachers in the schools which had just rotated into IOA membership had little idea about the range of Center benefits. Explanation of this particular non-outcome probably can be found in the young age of this particular IOA as well as its environmental setting which rewarded the service of district-wide rather than individual teacher needs.

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*The Hanburg Coordinator has recently served on the oral defense committee for a dissertation involving "think-links."

provided an excellent illustration of the successful role of the Coordinator in district problem-solving.)

In summary, the maintenance and growth outcomes are similar in both counties. IOA linkages/configurations led to capacity increases on the part of participating organizations in three main areas: recruitment selection for new teachers (recruitment/enrollment for graduate sutdents); awareness of resource acquisition opportunities; and acquisition of personnel, materials, and research knowledge.* The focus in Cardon County was District-centered; the focus in Hanburg County was teacher-centered. Thus, there were greater teacher impacts in Hanburg County than in Cardon County where the major teacher outcomes were use of equipment/laminating materials at the center and enrollment in courses and workshops.

7.3.4 Practice Improvement in Hanburg and Cardon Counties

Practice improvement outcomes were not well documented due to the nature of this study which did not include access to classrooms or pupils. Both Cardon and Hanburg Counties did report attitude changes which could be related to practice improvement. In Cardon County there was "a coaxing up" of teachers who, in the presence of student teachers "had to be on top of everything." Similarly, in Hanburg County, teachers were "on their best behavior" due to the presence of student teachers. Student teachers also used skills and techniques in the classroom which were then transferred to co-operating teachers and other teachers who either observed the co-operating teachers' classrooms or participated in the Center coordinator's seminars.

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*OFE is beginning to strengthen the research focus of Centers.

7.3.5 Institutionalization of the IOA in Eastern State and the County Sit

Viewing the three IOA patterns of institutionalization in Table 7-3 (p.208) reveals that the interorganizational arrangement level exhibited the greatest amount of institutionalization and stability. This level consisted of five separate interorganizational arrangements linked by monthly meetings of representatives. The arrangements themselves involved a multiplexity of linkages. In the financial area (a stable sum, the same amount in recent years) was allocated to the OFE level. In terms of core function, OFE placed and supervised student teachers in the field. Contributing also to its stability was its relation to needed outreach programs and grass roots support vital to a university in these times of declining fiscal support. In its fourteen or so year history, OFE has survived "blood shed" over its first Director's power struggles with the college of education's departments, numerous acting Directors of OFE and numerous deans of the college of education. Again faced with a turbulent college of education environment, OFE (with no budget increases for inflation) and the College were meeting yet another challenge at the close of this study.

Again, the Cardon County and Hanburg County IOAs exhibited slightly differing patterns of institutionalization. In terms of core function, the Cardon County IOA was considered more core to the district organization while the Hanburg County IOA was considered more core to the schools organizations. Usage patterns varied in the same manner: Cardon County administrators (both in number and intensity) utilized the Center more than their Hanburg County counterparts.

Focusing on institutional competition, the Hanburg County centers faced no similar competition. However, Cardon County had limited competition in the problem-solving arena from a federal project staffed by some teachers at a school near the Center. The Cardon County Center did outclass this competition in the range and continuity of services it offered as well as the talents of its coordinator in identifying and meeting County needs.

Both sites were incorporated as separate items in their districts' yearly budget cycles. Both have survived district budget cuts which eliminated such items as driver education from district budgets. And both had firm and clear agreements between the university and district regarding specific fiscal exchanges. Additionally and very significantly, Cardon County had a detailed formal governance document signed by both district and university officials. This document also allowed for a one year notification period prior to the dissolution of the agreement--a provision helpful to the stability of the arrangement.

There was an additional and interesting cross-site difference on the criterion of survival of new staff. The OFE, Cardon County site and several Hanburg sites survived, at the least, several different leaders. However, one Hanburg site had a coordinator who reported that if he and the secretary departed, the Center would no longer exist.

Turning to usage patterns, there was clear evidence regarding widespread usage in school districts. Widespread usage in terms of student teacher placement and supervision functions also existed in college of education departments. However, in the knowledge acquisition area, faculty reported little evidence of acquisition and incorporation of new or craft knowledge generated in the field.* Rather, their primary usage of knowledge from the field was that related to feedback on methods courses or new curriculum such as a revised special education curriculum. Toward the close of the study there was an indication of a routinization of OFE's feedback role in curriculum development at the elementary education level.

There were several additional indications of routinization and institutionalization which were not reported on the institutionalization chart. All of the Hanburg teacher centers had regularly published newsletters which were distributed to teachers, OFE Staff, and some county administrators. Every teacher center whether in Cardon or Hanburg County had one formal involvement (Advisory Council, Operating Committee or Policy Board) with regular meetings and regular membership consisting of representatives of participating organizations.**

Integration in school activities in Cardon County provided evidence of routinization of IOA operations. Furthermore, in Cardon County, integrations of the Coordinator in district activities enlarged the focus of the IOA. Recently the coordinator reported to an OFE meeting that as a result of her work in bridging, the county had asked her to handle orientation matters in the fall.

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*There was evidence of the incorporation of think-links techniques in a graduate methods training course and in a faculty publication.

**Schedule of meetings, type of members, and role of members varied within and across sites.

Finally, the rotation serial which served as a leitmotif at the OFE level as well as at the county levels provided strong indications of institutionalization at each level. The rationale behind rotation of school memberships in the IOAs was basically two-pronged: Rotation of schools allowed new schools to partake of the IOAs' benefits and allowed past school members a respite from the responsibilities of student teacher supervision. In each setting, the county or schools seemed to initiate discussions of rotation*. And in each setting, enough benefits accrued to the university (stability of the arrangement; provision of new candidates for graduate courses; enlargement of the structure for access) that OFE agreed to regular rotation of school memberships. Thus, this routine movement in and out of Center membership served to help ensure continuity of the IOAs by the infusion of new members which contributed to maintaining the balance of benefits among participating organizations in the IOAs.

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*Each county differed slightly in terms of balance toward one or the other rationale. For instance, in Hanburg County the rotation idea took on political overtones. Several more rural schools in less wealthy areas vociferously asked for membership in the IOA.

TABLE 7-3

DEGREE OF INSTITUTIONALIZATION: EASTERN STATE SITE

Supporting Conditions	Teacher Center Cardon	Teacher Center Hanburg	University Field Unit OFE
Considered a core function			
• within local schools	weak	partly present	partly present
• within the college/university department or faculty	partly present	partly present	partly present
Used on a regular or daily basis	partly present	partly present	present
Provides benefits/payoffs to:			
• school administrators	present	partly present	partly present
• teachers	partly present	present	present
• university staff	weak	weak	partly present
• Teacher Center staff	present	present	present
Outperforms or eliminates competing practices	partly present	present	d.k.
Receives support from:			
• district administrators	present	present	present
• school building admins.	present	present	present
• college/university admins. and deans	present	present	partly present (turbulent adm
• state-level administrators	d.k.	d.k.	d.k.
Passage Completion			
Achieves stable funding source	partly present	partly present	partly present
Functions performed are certified by:			
• school authorities	present	present	present
• college/university auths.	present	present	present
Supply and maintenance provided for	present	present	present
Organizational status is formally established in regulations			
• within school district	present*	present	present
• within university	present*	present	present
Cycle Survival			
Survives annual budget cycles	present	present	present
Not weakened by departure or introduction of new staff	present	partly present	partly present
Achieves widespread use			
• in school district	present	present	present
• in department, faculty of university/college	weak	weak	partly present
• in State	d.k.	d.k.	partly present

*formal governance document exists
d.k. = don't know

7

Overview of Outcomes for the Eastern State Site as a Whole

There seems to be a number of variables which help to explain the outcome patterns reviewed above. These outcome patterns fell into two main categories: teacher-directed or district-directed. Variables mediating these outcomes can be classified in the following interrelated groupings:

- Historical Background
- Environment of Participating Organizations
- Characteristics of the Interorganizational Arrangement
- Boundary Person (Coordinator) Role/Background

The Cardon County IOA was only four years old while the Hanburg County IOA was twelve years old. One coordinator noted that there was a time lag of about four years in observing effects of teacher centers. Thus, both Cardon and Hanburg Counties occupied different places in their interorganizational life cycles contributing to different outcome patterns. Another difference in viewing outcomes at the two sites was the environmental niche in which each interorganizational arrangement was set. The resource configurations, turf issues, and needs of participating organizations were distinct. The flexibility (and power) inherent in the Boundary Person's role allowed the coordinator to interpret and seek to meet the specific needs of participating organizations.*

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*Additional role specifications which appeared to contribute to outcomes included homophily with representatives of participating organizations, goal congruence, leadership, energy, familiarity with practitioner practices, and responsiveness to requests.

Finally, the characteristics of each IOA with its own patterned structure for access to district and university resources seemed to account for much of the outcome differences. Included here were formal and informal linkage patterns, representative and staff stability, key leader support, environmental scanning, and wealth of resource materials. Most importantly, the key IOA characteristic of provision of a regularized, routinized mechanism for access allowed for not only the sharing of fiscal and material resources, but for the sharing of information and knowledge regarding the needs and solutions to problems of schools and university people and their organizations.

7.4 OUTCOMES SUMMARY: MIDWESTERN SITE

7.4.1 Global Outcomes at the State Level

The State-wide teacher center network has been chiefly an assembly of individual centers, to which its delegates minister. Its effects are more palpable at the local level, which is also in keeping with the prevalent policy of de-centralization, uniqueness and networking. There have been, however, secondary effects at the State-wide level, along with outcomes in local centers which result from their participation in a collective enterprise.

7.4.1.1 Power and Status Outcomes

In itself the State-level network has only achieved a firm institutional identity in its relatively short life. It has, however, created a distinct role for itself as a vehicle for the dissemination of new curricula, media (e.g., educational T.V.),special projects (the State's Centennial Celebration) and of some teacher upgrading efforts. The 9 existing centers practically blanket the State, each covering a large number of school districts and, as such, streamlining dissemination from the State office. Relatedly, participation in the State-level network and, more particularly, in its policy and advisory boards, have increased the local status of its delegates, who are perceived as more cosmopolitan, better connected and more influential at the regional and State levels.

7.4.1.2 Linkages as Outcomes

Outcomes have been most substantial here. The network, when it meets, results in a state-wide forum for discussion of educational issues between teachers, school administrators, college and university staff and state-level administrators. These discussions have direct impacts on state educational policy and on local policy. Similarly, meetings of the advisory board and of the several teacher center coordinators accelerate the diffusion of new ideas and of new techniques or products appearing to have "worked" in one jurisdiction. In a more general sense, state-level meetings and coordinator projects increase exchanges of practice-relevant knowledge among educators who typically have very few cross-role communications (i.e., between college professors, school administrators and teachers) and a sparse diet of within-role exchanges due to their geographical dispersion. In some ways, the network meetings are a pretext for assembling educators from across the state who have very few other occasions to meet.

7.4.1.3 Maintenance, Growth, and Capacity Building State-wide:Midwest

The four original centers have had varied fates. The two studied in detail, Arcadia and Three Rivers, have measurably increased their offerings, audience and base of support, although Three Rivers has been weakened by staff turnover and by uneven support from district administrators. Less data were collected from the other two founding centers, but there is evidence of personnel turnover and indications that local superintendents and State college deans are unwilling or unable, in a fiscally lean period, to make up the full amounts of the foundation grant as that source is depleted in 1981.

The five centers which became operational in 1979-80 have had rough sledding, although data are thin here as well. Making one's way economically and politically in the local landscape was not easy. It appeared that firm patronage and commitment at either the State college level or district office level was harder to obtain than for the first four centers. Nevertheless, the State-level policy board of the Teacher Center Network went ahead with plans to consolidate existing centers and to open two new ones.

Funds have been difficult to come by. Three funding proposals - to the foundation sponsoring the original grant, to the State-level education office and to the federal government - have been turned down. Some small-scale projects have been launched (writers in the schools, in-service upgrading of the qualifications of multi-age classroom teachers.)

It is not clear what will happen at the State level when local school districts and/or colleges assume total funding. There may well be only a skeletal coordination function, such that the whole network is little more than the sum of its individual centers. With State or federal funding, on the other hand, the network can expand to a more prominent role in disseminating new practices, systematically upgrading teacher qualifications, and multiplying exchanges between knowledge-producing and -consuming institutions. What is already clear is that the network has led to the local creation of intermediary centers spanning colleges or universities with schools and thereby increasing both the rate and the amount of practice-relevant knowledge flowing into both institutions. Finally, there has been a uniform process of goal enlargement within the participating colleges and universities as a result of their affiliation with these centers. The in-service training function has increased significantly by relation to the pre-service function, and the involvement of college staff in instructional problem-solving has risen concurrently.

7.4.1.4 Practice Improvement State-wide at Midwest

Outcomes here are best viewed at the level of individual centers. There is some evidence that State educational administrators are receiving more policy-relevant inputs as a result of the network, and that teacher center coordinators do their jobs better as a result of their exchanges with fellow co-ordinators. Some modest teacher recertification projects sponsored by the State, delivered through the network and organized by local centers may have resulted in enhanced capacity, but cannot be causally tied to specific practice improvements.

7.4.1.5 Institutionalization of the State-wide Network:Midwest

As a set, the 9 centers have not as yet achieved stable institutionalization (see table 7-4), in part owing to their youth. They are seen locally as a legitimate, even inspiring organ for staff development, but not as a core function. They provide clear rewards to teachers and, thereby, to school district administrators, but are sometimes viewed as "frills" by the latter. Their relationship with the State colleges or universities to which many centers are connected has been, on the whole, tentative, but it has drawn these institutions into an expanded in-service role, whereas their conventional mandate was almost exclusively pre-service. Support is still soft, especially in the case of new centers with an embryonic set of activities and no firm budgetary base. As these centers turn to school districts and colleges to which they are only partially yoked and which themselves are financially strapped, they come away with little. Support has been stronger in cases where teacher centers have sponsored workshops or courses which are then applied as college-level credits. The college earns revenue from programs which the centers have designed, publicized, housed and administered. The data suggest that, as the web of oftentimes implicit and non-programmatic interdependencies between centers and state colleges grows and differentiates,local support increases and other kinds of knowledge-based exchanges occur between teachers and college staff.

TABLE 7-4 DEGREE OF INSTITUTIONALIZATION: MIDWESTERN SITE

Supporting Conditions	Teacher Center Arcadia	Teacher Center Three Rivers	State Level Teacher Center Network As A Whole
Considered a core function • within local schools	Present	Partly Present	Still Weak
• within the college/university department or faculty	Present	Partly Present	Still Weak
Used on a regular or daily basis	Present	Partly Present	Still Weak
Provides benefits/payoffs to: • school administrators	Present	Present	Present
• teachers	Present	Present	Present
• university staff	Present	Weak	d.k.
• Teacher Center staff	Present	Partly Present	Partly Present
Outperforms or eliminates competing practices	Present	Present	d.k.
Receives support from: • district administrators	Present	Weak	Still Weak
• school building admins.	Present	Partly Present	d.k.
• college/university admins. and deans	Present	Present	d.k.
• state-level administrators	Not Relevant	Not Relevant	Partly Present
Passage Completion			
Achieves stable funding source	Present	Weak	Absent
Functions performed are certified by: • school authorities	Present	Present	Present
• college/university auths.	Present	Present	Present
Supply and maintenance provided for	Present	Weak	Still Weak
Organizational status is formally established in regulations • within school district	Absent	Partially Present	d.k.
• within university	Present	Partially Present	d.k.
Cycle Survival			
Survives annual budget cycles	Present	Weak	Dubious
Survives departure or introduction of new staff	Not Present	Weak	Weak
Achieves widespread use • in school district	Present	Partly Present	Still Weak
• in department, faculty of university/college	Present	Absent	Still Weak
• in State	Not Relevant	Not Relevant	Still Weak

d.k. = don't know

7.4.2 Outcomes Summary for the Arcadia Site: Midwestern State

7.4.2.1 Power and Status Outcomes

At the individual level, teachers referred often to the acquisition of a sense of professionalism, as mentioned above. The connotation was that of heightened self-esteem rather than external validation. Since workshop participation was used--as was the case in all centers--primarily to gain contract renewal by accumulating a fixed number of workshop hours every five years, there were no increments in terms of advanced degrees or better positioning for promotions. Arcadia State College staff, on the other hand, especially the two center staff members, perceived themselves as having increased local leverage and greater influence within the College. They were also so perceived by other respondents, who spoke as well of an enhanced reputation of the Center throughout the State, notably in the State educational office.

Organizationally, local school and county administrators appeared to enjoy the social recognition symbolized by the State College's program, but took it more for granted than at other sites in the study. At the college itself, the two center staff members, their department and the Psychology and Education section enjoyed an enhanced institutional reputation and collected a series of bargaining chips which were later traded in the form of increased physical space for the center and a projected increase in staffing in the five-year plan. The center became something of a showpiece for the department and the State college who were competing with neighboring institutions for high-school graduates from a fast-declining pool of teachers in training. That Arcadia held its own not only in recruitment but also in subsequent placement of its graduates was attributed to a great extent to the center, which then enjoyed enhanced status. There were other forms of --usually implicit--bargaining and exchange. For instance, school administrators reciprocated teacher center services by giving teachers more released time during school hours, by bussing pupils into the center for work with pre-service candidates, by donating materials.

7.4.2.2 Linkages as Outcomes at Arcadia

At the individual level, teachers reported a more intense and consequential exchange of materials, ideas and instructional techniques as a result of teacher center use. Much of the exchange occurred primarily at the center, but some resulted from social networks created after workshops were over. There were also systematic reports of increased professional exchanges within the schools; teachers would, for example, return from the center with "a surprise" for a colleague or, alternatively, would pass on materials or idea formats to others. Time was also set aside during staff meetings to propose purchases, workshops or special projects to the center, an activity which involved local teachers in more substantive exchanges.

There was a similar phenomenon within the State College. Staff members in the center worked together on a daily basis; other departmental members came in for special projects or as resources. Team-teaching experiments were undertaken across departments whose members worked as well with pre-service teachers. More distant departments (music, mathematics, physical education) borrowed center materials or taught courses there. In one serial, a summer workshop student was initially referred to a math professor for a project in computer programming, who then developed the idea of a course to be taught in the center by a member of his department. More significant, continuous links were established between local schools and the center, whose staff considered itself "on call" to the eight school districts it serviced.

7.4.2.3 Maintenance, growth, and capacity as Outcomes at Arcadia

Testimony from teachers was embarrassingly evangelical, with references to "rejuvenation" and "revitalization." Basically, as one informant said, "I use the center to feel I'm an o.k. teacher," to ward off stagnation and "get re-enthused." The center provided a sense of "feeling abreast with my field" and "getting updated," which took on more significance in a rural region which had had, up to that point, almost no resources for professional development aside from summer courses. Several informants also mentioned pressing their superintendents for more local in-service.

Within the college, the two center staff members dwelled more on the costs of a drastically increased outreach activity. Both felt they had less time available for reading or course preparation; one felt that the strong emphasis on hands-on teaching reduced course coverage and more conceptual inputs. At the organizational level, however, the center thrived. During the 18 months of this study, its physical space was doubled, its support staff put on stable college funds and its program made the centerpiece of a proposal to grant graduate-level certification for a new program in elementary education. Such a program would, of necessity, generate revenue to the college through in-service enrollments.

7.4.2.4 Practice Improvement Outcomes at Arcadia

Teachers reported uniformly an enriched materials base and a more diverse repertoire of activities as a result of center use. Some tied this to pupil gains; most claimed more generally that they were more effective in the classroom. This was especially the case for areas in which teachers felt weak, a finding replicated at the Three Rivers site (see below). There were two additional findings of interest. Informants invariably mentioned at least one incident in which the center served as a crutch, stimulant or repository for undertaking changes in the classroom. Many felt that they would not have followed through on these projects without the structure provided in the workshop format. All claimed that classroom practice had been measurably improved; most said that they were encouraged thereby to try another, sometimes more ambitious, project. A second finding of note: although all respondents felt that that the center was pluralistic, i.e., did not advocate a particular approach or theory, several remarked that their instruction had changed. There was more pupil self-direction, individualization of instructional treatments and integration of curricula as, for example, in a learning center approach observed in one school. Much of this appeared to stem from the materials-based nature of the center's resources and from observations of pre-service students using inquiry and simulation approaches with the visiting teacher's pupils.

7.4.2.5 Institutionalization at Arcadia

As table 7-3 shows, the Arcadia Center is routinized in its fifth year as a member of the state-wide network. Teachers view the center "as an extension of my school; it's the first place I think to go when I have a problem or when I start getting organized in the fall." Workshop participation also appear to be built into their professional routines, as does the ordering of materials and the scanning of the newsletter for new materials received. Local and district school administrators appear (data are thinner here) to view the center as a bottomless resource repository for their staff for which they pay virtually nothing. The State college administration supports the center unequivocally and derives very tangible rewards from it. The proportion of budget accounted for by the foundation grant has been picked up by the college.

7.4.3 Outcomes Summary for the Three Rivers Site: Midwestern State

7.4.3.1 Power and Status Outcomes

The center provided status enhancement to teachers in three ways: giving social recognition through the investment made on their behalf by North Central professors, acquiring credits toward post-graduate degrees which could eventually aid in promotion, and enhancing the status of those teachers who gave workshops on their own practices. The university gained in status for having originated the state-wide network more than for having helped to found the local center. The teacher center coordinator, who was a graduate assistant at North Central University, came to be perceived as an expert on the needs and characteristics of practitioners, and to take on the role of the formal conduit between the university and local schools.

There were also some power shifts worth noting. As the teacher center centralized the bulk of in-service training, district administrators and school principals lost some control over the choice of training events and trainers. Here was a classic instance of tacit inter-institutional bargaining; the school district gained in capacity but lost in control and implicitly agreed to the transaction.

7.4.3.2 Linkages as Outcomes at Three Rivers

Outcomes have the same trend but a lower impact than at the Arcadia site. Individual teachers reported slightly more within-building exchanges stemming from teacher center use, with one dramatic exception (the micro-computer project) in which lateral exchanges were multiplied. Some exchanges of materials, experiences and ideas between buildings were also reported. Institutionally, the teacher center provided a more formalized structure for access to university expertise, replacing to some degree the "old boys' network" which school administrators had used to contact university staff on a problem-by-problem basis.

At the university, individual professors in the elementary education department felt that they now had more contact with and interest in practitioners, whereas their prior concerns had been primarily with pre-service students. For the college of education as a whole, the teacher center had become the chief, if not the sole, vehicle for contacts with local school. Increasingly, in fact, the teacher center played a middleman role, putting university staff in contact with school personnel, organizing certificate-granting programs to be attended by teachers and taught by North Central staff, matching research foci in the elementary education department with expressed needs of teachers as these surfaced during teacher center events.

7.4.3.3 Maintenance, Growth, and Capacity Building as Outcomes at Three Rivers

Individual teachers associated activity at the center with professional growth. Testimony was not as strong as at Arcadia--possibly because of the absence of alternative knowledge resources in Arcadia--but the direction was similar. Teachers felt they could remain "up to date," that they now had more resources available for practice improvement and that the center was a stagnation-fighter, a source of skill extension and a stimulant to the adoption of new practices. Finally, the center provided teachers with access to "the best practices other teachers around here are using."

Organizationally, teachers and administrators credited the center with increasing the circulation of new ideas and practices, with providing a support system for teachers which had been more random and fluid in the past and with the more rapid dissemination of university knowledge and instrumentation. The final item warrants an illustration, since it touches the core of knowledge transfer between knowledge-producing and -using units. A math professor, in experimenting with the measurement of children's computation and logical reasoning processes, began to use micro-computers both as a diagnostic and an instructional device. He showed the device to staff members at the center, who organized a workshop, for which the professor provided sample programs and the micro-processor itself. Very rapidly, the hardware and programs were checked out and extended (a wider range of programs, a second micro-processor), with wide-ranging impacts at the classroom level. The serial ends ultimately with the purchase by the district of 17 micro-processors, largely as a result of teacher center activity.

A second example: a geography professor from another college within the university sought to disseminate new materials for use in schools and contacted the teacher center as an intermediary for displaying the material, training teachers and giving follow-up assistance throughout the district.

The first illustration is more telling yet when outcomes are traced out to the university end. In this incident, interaction with in-service teachers led to revisions in the professor's teaching and in his research orientations, both of which became "more complex, more open to dissonant information, more of an asker of questions than a provider of solutions."

There were other modest institutional changes at the university which merit mentioning: a shift in priorities more fully to in-service training and consultation, increased revenues through enrollment in center-organized workshops which could be used for continuing credit, extension of resources for coursework to the teacher center resource bank and, on a less sanguine note, role overload on the professors in the elementary educational department who worked closely with the center.

A final outcome in this category is also pertinent. The Three Rivers center was defined, perhaps more sharply than the other centers, as a resource for, between and by teachers. That the university chose to sponsor such a center and to elevate the social status of craft knowledge was an additional reinforcement. Along with increments in craft pride came some raising of collective consciousness and, with that, a somewhat more militant note in discussions with school administrators.

7.4.3.4 Practice Improvements at Three Rivers

Teachers reported that the center had helped demonstrably to enrich their curriculum and store of instructional materials, and had led to more diversity in the organization of classroom instruction. The same finding emerged from a survey conducted by a North Central graduate student. What did not emerge from the survey but was underlined in interviews as the center role in making teachers stronger in areas in which they felt underqualified, often the science area. Where activity centers had been distributed and teachers had taken workshops in this domain, there was evidence of greater integration of curriculum in the classroom. The microcomputer and poets-in-the-classroom projects both led to assertive claims of instructional effectiveness and pupil gains.

In the university, staff members who had worked with center participants claimed that they now had "a more complex vision of school practice" and that their teaching was more practitioner-sensitive, more "grounded." For the few who had research activity underway, the outcome was analogous. In a more macro-organizational sense, the dean felt that the center provided a more rapid and efficient conduit for the dissemination of conceptual and instrumental knowledge from the university to practitioners.

7.4.3.5 Institutionalization at Three Rivers

makes clear, the Three Rivers center is not strongly institutionalized. Although its outreach is increasingly wider (according to center statistics, nearly half the elementary level teachers and one-quarter of the secondary level teachers in the district used the center in 1979-80), its activities are not seen as indispensible to district teachers or administrators, nor to the university staff as a whole. Its strongest support comes from the college dean, a prime mover in the founding of the center to which he has a personal commitment. But the center is, here as well, "only one of our commitments and not a major one compared with our teaching." The center appears to be orphaned, without strong claims of ownership made by the university or the school district. Only recently has teacher commitment solidified, and it may be more related to teacher-administrator conflict than to center support per se. Rewards accruing to teachers are concrete and numerous, but they mesh with other practice-improving inputs available in the district and thereby dilute the impact made specifically by the teacher center. Rewards at administrative level are also present, but are intermixed with reservations about the whole enterprise. Few university staff profit directly.

Stable funding is uncertain. Unlike the Arcadia center, Three Rivers has no back-up resource base. It pays for its autonomy in reduced budgetary and institutional support, having already been cut back for 1981. Nor does it provide steady rewards for its personnel, among whom more turnover is likely. Ironically, although the Three Rivers center has become highly visible and familiar to local practitioners, and has created durable links with a small set of university staff, its institutional base remains fragile.

PART EIGHT: CAUSAL ANALYSIS

8.1 GENERAL MODEL

Cross-site analysis also included an attempt to look across the three cases for common patterns. We were interested in comparing cases having a "positive" profile of outcomes (e.g., classroom practice improvement and increase in between-school linkages, growth in research or servicing capacity within participating universities, to determine which constellation of factors led to such outcomes and whether there was an overlap between constellations across cases. We also wanted to know whether cases with an incidence of negative outcomes were comparable and contrasted in a systematic way with the stream of variables leading to the outcomes in "positive" cases.

There were some obvious methodological problems in conducting this exercise. With a total of five cases (Arcadia and Three Rivers for the Midwestern site, Cardon and Hanburg for the Eastern State site and the IOA as a whole for the Eastern Private site), any comparison would entail more variables than cases. Also, contrasts and comparisons were carried out with qualitative data using logical induction rather than with quantitative data using procedures.

Identification of key variables. Qualitative modeling was built into the data collection process. During field visit write-ups and coding, researchers identified important themes which recurred and appeared to account for the pattern of outcomes. These leit motifs were explored in more detail, since they appeared salient at the local sites and constituted a cluster of variables that covaried in a systematic way. For example, the theme of "local commitment" recurred in the Midwestern case. When unbundled, it contained several distinct variables, e.g., degree of school-university

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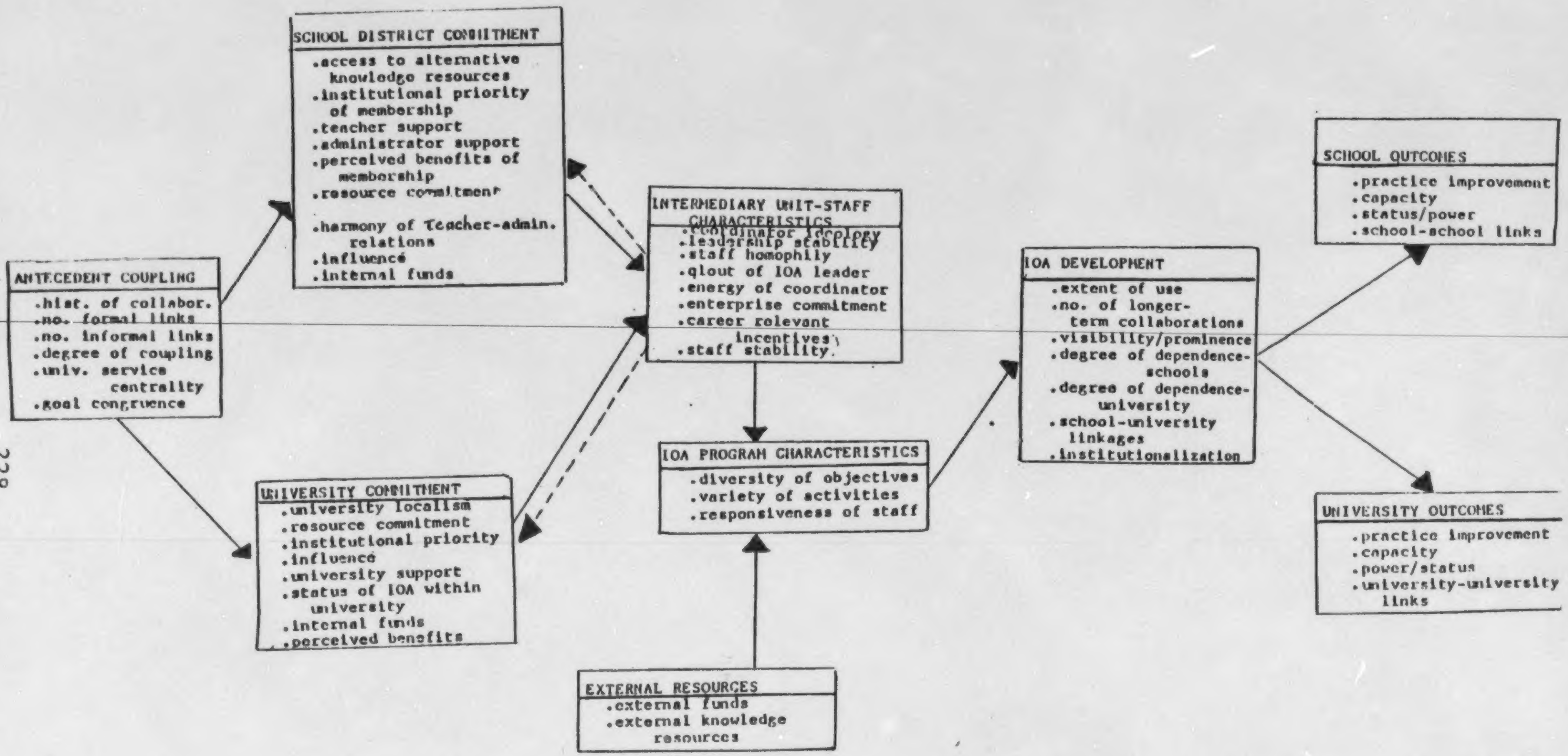
*The procedures and products outlined in this section were developed by M.B. Miles and A.M. Huberman in a national study of education innovation, Crandall, D., et al, A Study of Dissemination Efforts Supporting School Improvement. Andover, Mass., The Network, 1981. Any use of the procedures and tools should be credited appropriately.

coupling, number of informal links, goal congruence, centrality of the university's service/outreach function and history of collaboration. This cluster of variables helped to explain the pattern of school-university interactions around which the interorganizational arrangement was built.

Each field researcher accumulated a list of leit motifs and core variables throughout the collection of data. These lists were empirically driven; they emerged primarily from the data and could be shown to exert a strong directional influence at each of the sites studied. At the end of data collection, lists from each of the three cases were compared. There emerged a core set of 51 variables common to all cases. Variables were then arrayed temporally, as in a path model, and checks were made within each case to confirm both the direction of causal influence and the pattern of covariation. For instance, low access to alternative knowledge resources led to higher institutional priorities of IOA membership by school officials in three of the five IOAs studied. In the remaining two cases, greater access to such resources appeared to lower institutional priorities of membership in the interorganizational arrangement. In all five instances, access to knowledge resources and degree of institutional priority were key variables.

The general model for the five sites studied is shown in Figure 8-1 . The 51 variables are grouped into nine thematic categories. We can review the model rapidly as a portrayal of the life cycle of the interorganizational arrangement, beginning with the relationships between the college/university and the school district(s) prior to the creation of the arrangement. We hypothesize that the closeness and positive nature of antecedent coupling determines to a great extent the commitments made to this enterprise by the school district(s) and by the participating college

Figure 8-1 General Model for the IOA


SCHOOL DISTRICT COMMITMENT
.access to alternative knowledge resources
.institutional priority of membership
.teacher support
.administrator support
.perceived benefits of membership
.resource commitment
.harmony of Teacher-admin. relations
.influence
.internal funds
ANTECEDENT COUPLING
.hist. of collabor.
.no. formal links
.no. informal links
.degree of coupling
.univ. service centrality
.goal congruence
UNIVERSITY COMMITMENT
.university localism
.resource commitment
.institutional priority
.influence
.university support
.status of IOA within university
.internal funds
.perceived benefits
INTERMEDIARY UNIT-STAFF CHARACTERISTICS
.coordinator ideology
.leadership stability
.staff homophily
.qlout of IOA leader
.energy of coordinator
.enterprise commitment
.career relevant incentives
.staff stability
IOA PROGRAM CHARACTERISTICS
.diversity of objectives
.variety of activities
.responsiveness of staff
EXTERNAL RESOURCES
.external funds
.external knowledge resources
IOA DEVELOPMENT
.extent of use
.no. of longer-term collaborations
.visibility/prominence
.degree of dependence-schools
.degree of dependence-university
.school-university linkages
.institutionalization
SCHOOL OUTCOMES
.practice improvement
.capacity
.status/power
.school-school links
UNIVERSITY OUTCOMES
.practice improvement
.capacity
.power/status
.university-university links

of education. The strength of these commitments then reinforces--or in the case of low commitment, weakens--the efforts of staff members of the arrangement. In some cases, the characteristics of the leader or coordinator of the arrangement can influence the level of commitment in the participating colleges and schools--thus the broken line leading from staff characteristics back to the boxes for school and university commitment.

Staff efforts lead to the design and implementation of the IOA program. Successful arrangements are characterized by diversity of needs of participating units by IOA staff. The program can also be strengthened by external inputs, in the form of funds and/or external information expertise.

The success of program efforts can be judged by the indicators of IOA development, including the degree of use by members, the number and closeness of ties and the degree to which the arrangement becomes durably institutionalized. Differing degrees of development should then result in differing outcomes at the school and college levels.

8.2. SITE-SPECIFIC CAUSAL NETWORKS

The core set of variables was also used to map causal relationships within each of the cases. Taking this set and adding to it variables which were site-specific, each analyst constructed a time-linked causal network moving from antecedents to mediating factors and out to ultimate outcomes. This schema constituted the most parsimonious account of events and outcomes at each of the five sites. For each network, a detailed explanatory text was drafted. Schema and text went then to the primary informant at each site for comments and amendments, after which a final rendering was made.

The causal network and accompanying explanation for each of the five sites are presented below. Summary instructions for reading these networks are given along with the first one.

In addition, a network for each of three IOAs will be illustrated with one of the mini case studies or "serials" which were conducted in the course of data collection.

8.2.1. Midwestern Case (Arcadia and Three Rivers Sites)

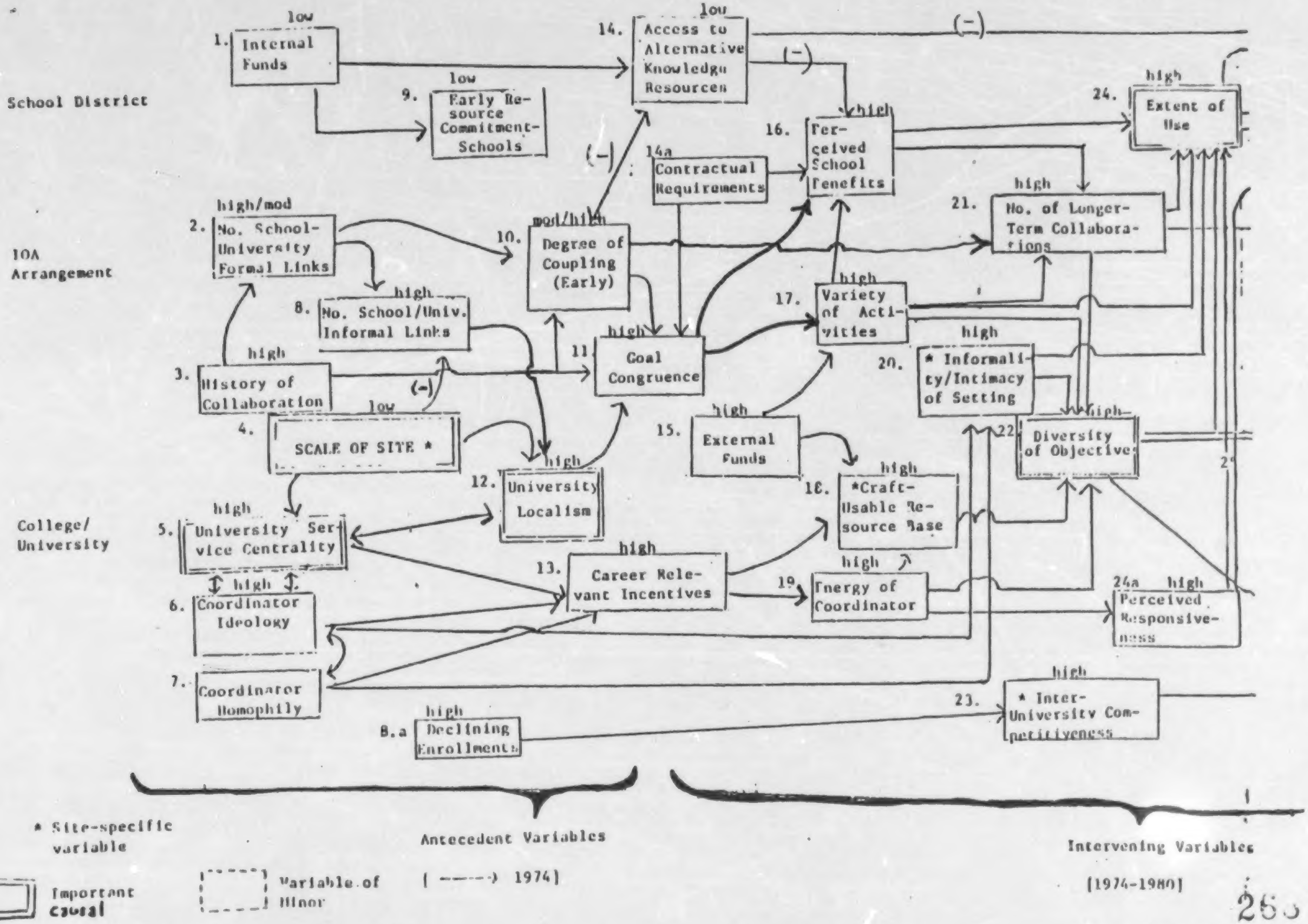
Introduction. As noted earlier, the causal network tries to put on one fold-out or reduced sheet the key variables and their interactions during the 12-month period of data collection. Each network is constructed from core or common variables across sites and of site-specific variables. For example, on the causal network for Arcadia scale of site (4) and inter-university competitiveness (23) are site-specific and are asterisked on the network. Double-lined boxes denote variables judged to be of particular importance. Broken-line boxes contain variables judged to be of less importance, but important to include as a contributing factor.

The network is organized in the following way: the beginning or antecedent variables are at the left of the page (nos. 1-12). They give way to intermediate or intervening variables, which usually come later in the history of the IOA; they cover variables 13-48. The outcome variables are arrayed in the far right column, from nos. 49-55.

Each box has a rating, high, moderate or low. For instance, box #3, "history of collaboration," is high, denoting a school-university collaboration which was fairly active before the IOA was created. The arrow goes to box #2, "no. school-university formal links," indicating that the history of collaboration contributed to a high/moderate number of formal arrangements between the two partners prior to the formal creation of the IOA.

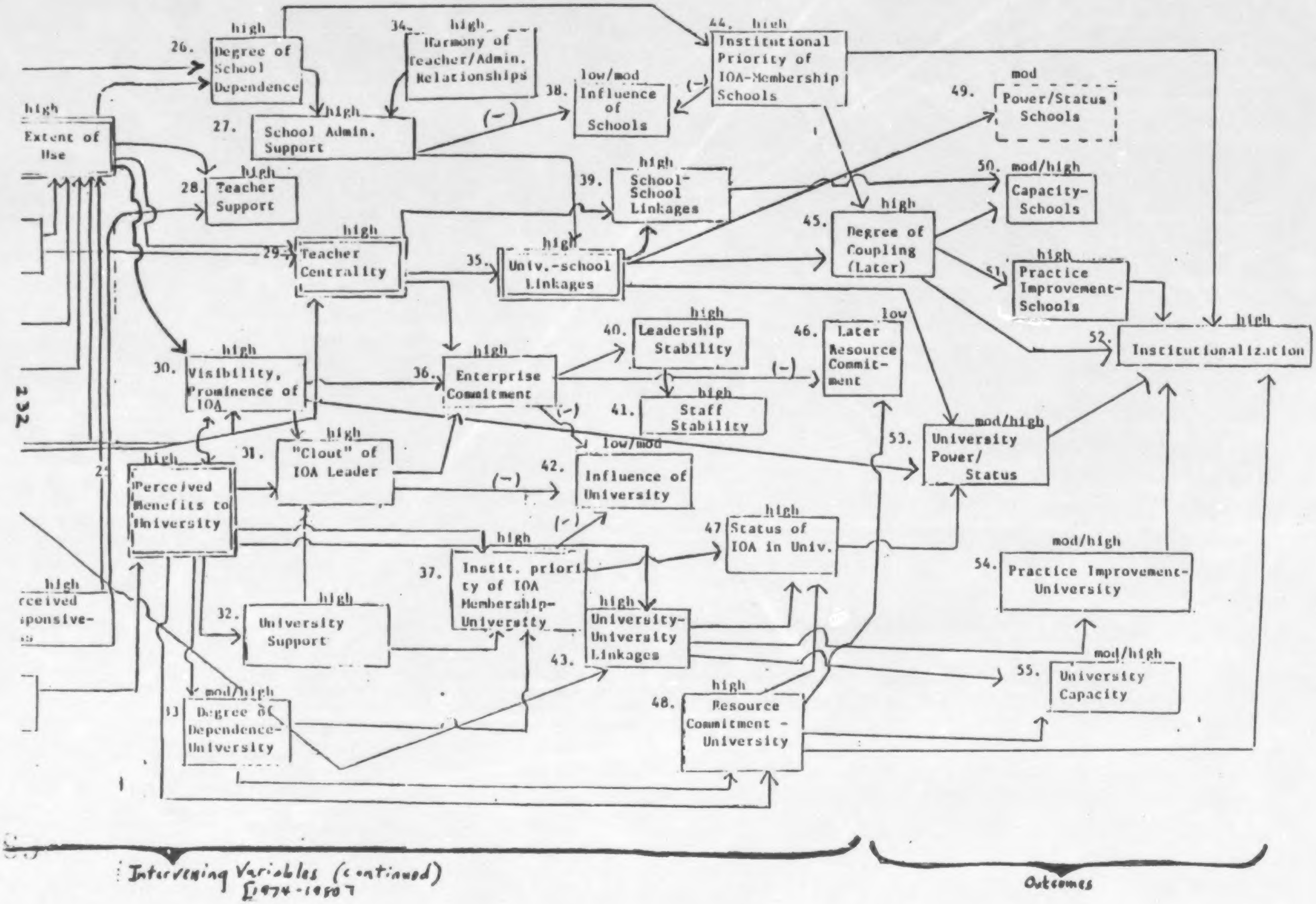
Some boxes have "low" ratings, such as #14, "access to alternative knowledge resources" (besides those provided by the intermediary agency of IOA). Low does not mean negative or inadequate. For example, box #4 signifies small-scale, not poor scale.

Figure 8-2 Analytic Configuration of Cause and Effect Relationships: Arcadia Site
(page 1 of 2)


School District
IOA Arrangement
College/ University
1. low Internal Funds
9. low Early Resource Commitment-Schools
14. low Access to Alternative Knowledge Resources
(–)
(–)
14a Contractual Requirements
16. high Perceived School Benefits
24. high Extent of Use
2. high/mod No. School-University Formal Links
10. mod/high Degree of Coupling (Early)
(–)
21. high No. of Longer-Term Collaborations
8. high No. School/Univ. Informal Links
17. high Variety of Activities
3. high History of Collaboration
11. high Goal Congruence
20. high * Informality/Intimacy of Setting
(–)
4. low SCALE OF SITE *
15. high External Funds
22. high Diversity of Objectives
12. high University Localism
18. high *Craft-Usable Resource Base
5. high University Service Centrality
13. high Career Relevant Incentives
6. high Coordinator Ideology
19. high Energy of Coordinator
24a high Perceived Responsiveness
7. Coordinator Homophily
23. high * Inter-University Competitiveness
8.a high Declining Enrollments
Antecedent Variables
[——→ 1974]
Intervening Variables
[1974-1980]
* Site-specific variable
Important Causal
Variable of Minor

continued on next page

Figure 8-2 (continued) Causal Network for Arcadia Site


26. high Degree of School Dependence
27. high School Admin. Support
34. high Harmony of Teacher/Admin. Relationships
44. high Institutional Priority of IOA-Membership Schools
38. low/mod Influence of Schools
(–)
(–)
49. mod Power/Status Schools
high Extent of Use
28. high Teacher Support
39. high School-School Linkages
50. mod/high Capacity-Schools
45. high Degree of Coupling (Later)
29. high Teacher Centrality
35. high Univ.-school Linkages
51. high Practice Improvement-Schools
52. high Institutionalization
40. high Leadership Stability
46. low Later Resource Commitment
(–)
30. high Visibility, Prominence of IOA
36. high Enterprise Commitment
41. high Staff Stability
(–)
53. mod/high University Power/ Status
31. high "Clout" of IOA Leader
42. low/mod Influence of University
(–)
high Perceived Benefits to University
(–)
47 high Status of IOA in Univ.
37. high Instit. priority of IOA Membership-University
high rceived sponsive-
32. high University Support
43. high University-University Linkages
54. mod/high Practice Improvement-University
55. mod/high University Capacity
33 mod/high Degree of Dependence-University
48. high Resource Commitment - University
Intervening Variables (continued) [1974-1980]
Outcomes

When an arrow goes from a "high" box to another "high box" there is no sign above the arrow. The same is true for arrows connecting "low" boxes. However, when a "high" box is connected to a "low" box or a "low" leads to a "high" there is a (-) sign above the arrow to indicate a reverse causal influence. For instance, (smallness of) scale of the site, box #4, helps to create a high "no. of school-university formal links, box #3." The low-to-high sequence accounts for the (-) above the arrow.

One final detail: There are three global streams in the flow chart. The stream along the top of the figure has most of the school district variables. The stream along the bottom has most of the college/university variables. The center stream contains the variables for the IOA as a whole.

Reading the network for the Arcadia site. For the Arcadia school district, the antecedent variables prepared it well for a more intensive involvement with Arcadia State. There were few internal funds (1) to organize its own in-service activities and, as a result, a low commitment of resources (9) to Arcadia State prior to the creation of the Arcadia Teacher Center. There were also few resources in terms of materials or expertise near at hand (14), partly as a result of low funds and partly since the district and surrounding counties had close ties (were closely coupled) with Arcadia State (10). When the Arcadia Teacher Center was created and received external funding (15), thereby increasing its already voluminous resource bank (18) and allowing for workshops and special projects along with borrowing materials (17), the surrounding school districts perceived the teacher center as a highly beneficial resource (16) to have nearby. This was even more the case since the center provided an easily accessible and productive way of getting in-service credits needed for contract renewal (14a).

The antecedent variables *for Arcadia State College* also predicted the creation of more intensive links with surrounding schools and teachers. The college had a strong commitment to service and outreach (5), with a correspondingly lower priority for publication and research. Much of this was due to the small scale of both the college and the surrounding districts (4) which the college was meant to service; the college saw its principal clientele as local (12) rather than statewide or national. There was therefore a good match when the ideology of the future teacher center coordinator (6) stressed outreach and practice improvement within the surrounding schools. Another important characteristic of the coordinator was his background as former teacher and administrator, which made him a "homophile" (7) of the teachers and thereby a good boundary-spanner between the college and the surrounding schools. These three factors--service centrality, outreach centered ideology and coordinator homophily--combined to orient the career incentives of the coordinator (13) toward a more teacher-sensitive approach in his own college-level instruction and a desire to make an impact on the local educational landscape.

The predictors of the *interorganizational arrangement as a whole* overlap with the school district and college variables. The history of collaboration (3), notably in connection with pre-service training of teachers, led to a high/moderate degree of linkage (2) between the college and surrounding schools and meant that the two entities were moderately well coupled (10), i.e., interdependent, before the teacher center was created. There was also, and as a result of the collaboration and coupling, good congruence (11) between the objectives of the college and the objectives of local school officials and teachers.

The *intervening variables* begin around the 1975-76 school year as the future coordinator moved into a new, enlarged space for his teaching and began to assemble a large resource bank comprising (18) kits, games, teacher made materials, commercial programs and publishers' series. The resource bank also grew as a result of two streams of external funding (15), one from special in-service projects (e.g., the non-degree program and the special education project) and the other from the statewide Teacher Center project with which Arcadia State was affiliated as a charter member in 1977. External funding allowed for a widening of the in-service format to include workshops and summer seminars along with special projects sponsored by the statewide network (e.g., the poets in the schools project). The variety of activities (17) along with the wealth of the resource base, heightened the perception by surrounding administrators and teachers that the teacher center is of benefit to them (16).

The center then appeared to take off. The energy of the coordinator (19) fueled by career-related motivations of service and of increased local impact, led to a diversification of objectives (22). In-service concerns grew; attempts were made to connect other college members to the center. Mechanisms were put in place to encourage teachers to make instructional changes using the center as a resource bank and a stimulant; one-on-one consultations between area teachers and teacher center staff became more frequent. Use of the center also grew as a result of the coordinator's perception that area teachers would come more often, have more professional exchanges with other teachers and exploit the materials bank better if the center were informal and physically comfortable (20) and if teachers were made to feel that Arcadia College staff were concerned about their professional development.

The diversification of objectives (22) seems to be a linchpin. Part of activity diversification involved longer-term collaborations (21) between teachers and the center. For example, teachers brought their pupils in for two-week

27[illegible]

periods; they planned and initiated an individual project during the summer workshops and followed through on it by borrowing materials from the center and reporting on outcomes. These two activities got the center into the change-accelerating business more directly and the fostering on practice change becomes a more salient objective (22). As this happened, more teachers came to use the center for one of its several functions (24). There was a resulting heightening of teacher support (28) for the center and a greater dependence by area administrators on the center as the principal resource for in-service training and ongoing instructional improvement. This in turn increased an already high level of support for the center on the part of area administrators (27). Diversification of objectives also led to other shifts. Use of the center became more central to teachers (29), more built into their monthly and yearly routines of planning instruction, making curriculum or organizational changes, differentiating the learning process in class, enriching back-up materials and getting stronger in weak areas. Teacher centrality in turn intensified the links between the center and surrounding schools (35), which in turn coupled the two partners still more closely (45). Also, as the center intensified these links, teachers found themselves exchanging materials, ideas and experiences (39) more than in the past. Finally, diversity of objectives added to the visibility and prominence of the teacher center (30), not only in the area schools but also within the college where it was seen as successful, as a resource for other departments and as a source of increased funding, better recruitment of freshmen and of better job placement for graduating teachers (25).

The antecedents and consequences of support within Arcadia State College were important factors in accounting for outcomes obtained through the teacher center. As the number of high school graduates declined (8a), there was increased competition between colleges/universities in the same catchment area for recruitment of new students (23). This also created funding problems at the competing institutions. As the Arcadia Teacher Center brought in funds through enrollments in workshops and special projects, and as it seemed to be an attraction for high school seniors shopping around among the various colleges and universities, the Arcadia college administration saw the benefits accruing to the college (25). These perceived benefits heightened the influence or "clout" of the coordinator (31), as did the increased prominence of the center in the area and within the statewide teacher center network (30). This contributed to the strengthening of the coordinator's commitment to the teacher center enterprise (36), leading in turn to leadership and staff stability (40 and 41). Also, the benefits perceived by the college induced still stronger college-level support for the center (32), a greater degree of dependence on the center (33) as a centerpiece for recruitment and outreach, a higher priority of the center within the college (37) and an increased commitment of resources (48), notably space and funds for purchasing more resource materials. As the college committed these resources, it also picked up the part of the funding provided externally through the statewide network and thereby helped to ensure the institutionalization of the center (52) as an internally budgeted operation.

Moving closer to the outcomes along the bottom or college "stream" of variables, diversity of objectives (22) included an attempt to draw other college instructors and departments into the center, both as users and as partners in collaborative projects or integrated per-service coursework. This enhanced links between the center and the rest of Arcadia State (43) and even to some degree between college staff itself. These links heightened the status of the center (47) among college staff and ultimately increased the college's capacity for service/outreach, along with increasing the resource pool available for college professors using teacher center materials and facilities (54). It should be noted, however, that these increases were moderate; the center did not revolutionize the college.

Two intriguing intervening variables, influence of school officials and teachers on the center (38) and influence of the college administration on the center (42) bear some comment. Both were judged low-moderate. The logic here is that while teachers and administrators had clear and strong input into the center through its governance and materials-purchasing procedures, many if not most of the center's thrusts came from its staff, notably from its coordinator. Examples were the special projects (non-degree teachers, water diversion project, energy education, nature studies, one-week workshops with follow-up and two-week visits by area teachers). The area supported the center strongly (27) and considered it a high priority (44), but showed such support in some self-effacing ways, generally by approving all initiatives coming from the center. Note also that both the early and later resource commitment by the schools (9 and 46) were low. There were in-kind services, such as release time and transportation to the center, but no funds, for example, for staff or physical space. Such resource commitment would have been forthcoming had it been asked for. But influence from school districts might have been greater if more considerable resources had been invested. As the arrow from #48 to #46 shows, the fact that the college picked up all the fixed costs reduced the necessity for area schools to contribute funds.

The logic for #42 is similar. As the figure shows, the enterprising "clout" of the coordinator, together with his commitment and high "ownership" of the center, put the college administration in a more passive, almost "blindly" supporting mode. The teacher center had a high priority for college officials (37) who realized that this had not been their initiative and that the best way to nurture it was to give it carte blanche. So college officials were not influential as much as they were supportive. There is one caveat here. The department chairman was instrumental in most of the center's endeavors, but should be seen more as a partner in the project than as an administrative facilitator.

Looking now at the outcomes, the area teachers and schools did not grow measurably in power or status (49) as a result of the arrangement. Collaborating with the college was not seen as a status enhancement, largely because of the smallness of scale and the service/outreach orientation at Arcadia state. Teachers did report a heightened sense of professionalism, but this was better connected to the enlarged sense of capacity (50) perceived by teachers and administrators. With the center's resources at hand, more could be undertaken and accomplished, and teachers could remain abreast of the field. The various workshops and consultations resulting from the tighter coupling between the college and area schools (45) led to widespread reports of practice improvement (51) in the classroom, notably in areas of weakness.

As mentioned earlier, the growth of the center also contributed modestly to capacity enlargement and practice improvement within the college (54 and 55). And both the new prominence of the teacher center (30) and the resources it brought in as a result of closer college-school linkage (35) enhanced the status and influence of Arcadia State (53), leading it, for example to propose a post-graduate program of which the center would be a central component.

Illustration. As a particularly successful arrangement, the Arcadia case warrants closer study. The best way of doing this, as for the other cases, is to read the case history itself (Huberman, 1981)*. However, some of that flavor can be rendered through an illustration which depicts the sequence and chaining of several core variables at Arcadia. We derive the illustration from one of the four micro-analytic case studies or "serials" reported in the Arcadia case history.

The Nature Studies serial. This was the most ambitious episode in the life of the Arcadia teacher center during the five years studied. It is a good cameo of the multiplicative effects at Arcadia of one activity in generating others. Here is the story in capsule form.

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*Volume I of this set

In 1976, some 14 acres of undeveloped land just west of the town center was donated to the local parks commission. The commission consulted with a local resident, Alan Janeway, a faculty member in biology at Arcadia State. Janeway counseled the commission to leave the area as it was, with its natural vegetation and animal life (otters and beavers).

Early in 1978, the commission received a letter from the Youth Conservation Corps, asking for proposals in education or conservational activities that the YCC could fund. One member of the commission, a fifth grade teacher in the town, came up with the idea of teachers bringing their classes to the area for observations, plant and leaf collection, the study of rocks and soil and possibly some small experiments. The commission discussed the idea, approved it and nomihated the commission president, Dr. Janeway, and Beth Lessing to draft the proposal. Beth Lessing was the wife of Don Lessing, the Arcadia Teacher Center coordinator. It was she who generated the concept.

The proposal called for the Youth Conservation Corps to clear the area, lay down trails and draw up formats for nature study by school-age children and their teachers. The proposal was submitted in September of 1978 and approved the following spring. A high school biology teacher, Steve Migros, was hired as project director for the summer program.

Don Lessing began to reflect on this project during the summer of 1979, having followed its progress through his wife and through Migros, a personal friend and the husband of a professor in the art department with whom Lessing collaborated. He came up with a concept calling for teachers to bring their classes directly to the nature area, where interns would take charge of observations, experiments and projects carried out by pupils.

The parks commission had no money for maintenance of the area after the summer project. Lessing proposed that the teacher center take over responsibility for maintenance and educational use. He found $1,000 in the center budget to cover these costs. More accurately, "I asked Robert (Goff, the department chairman) if we could do it; he found the money."

Lessing then looked around for help in designing the area for instructional use. Through the grapevine of fellow Experimental Program graduates, he located a school principal in a neighboring state, who came to Arcadia "with boxes and boxes of materials." Here the concept evolved of setting up 11 "learning stations" along the trail with different observations, exercises and experiments.

At the start of the 1979 fall quarter, the teacher center produced a brochure about the area and a booklet of activities for visitors. The class visits were described in the newsletter, which went out on a Monday. By Wednesday, the fall quarter was booked. Apparently, teachers liked the idea of outdoor instruction with the possibility of following up in the classroom.

Some 15 teachers and 300 pupils came to the nature studies area that fall. "There weren't any major problems." Although there were no major problems, there were some features needing correction. The dean of the college wanted a syllabus for submission and approval before this activity could be written into the third-year intern program. The interns, who were to plan in advance a series of observations and experiments, came under-prepared to the area. Also, few of the teachers followed up on the visit in their classes. The great number of learning stations (11) made visits rushed and often superficial.

The visits continued in the spring. Several changes were made progressively. The number of learning stations was reduced to four. Interns prepared for the visits by preparing a single activity, which involved fairly extensive research and preparation of materials. A more elaborate brochure containing preparatory and follow-up ideas for area teachers was written and distributed. There was spade work on a self-guiding tour for teachers and area residents.

Other features were added, e.g., use of the area and its trails during the winter for cross-country skiing. The center, with financial aid from the physical education department and R. Goff, bought 20 pairs of skis and rented them out. Three canoes were bought and a canoe trip integrated into the visits to the area.

There were further spin-off products. Lessing scheduled a workshop on nature studies in the summer workshop program for 1980, and prepared activities through the eighth grade level in order to reach secondary school teachers. The format for the workshop was similar to his coursework. It derived in large part from the Experimental Program. Participants did the same things which pupils would be doing; observations, experiments, collections and project work calling for the integration of basic skills with small area studies.

Finally, in the fall, two new rooms were set up for research and seminar work on nature studies. Lessing ordered more materials and erected displays.

Outcomes. In the initial 18 months, 86 teachers and 450 pupils were brought through the nature studies area. Interviews with four users yielded positive assessments. Teachers said that children were "really turned on" by the visit, that pupils began bringing in pictures and samples of plant life for class discussion, that otherwise abstract areas, such as ecology, were now discussed with more interest and thoroughness. Far more in-class work on nature studies was done. In several instances, teachers brought their classes to similar areas near the school for follow-up activities. All informants reported that science had been one of their weakest areas and that they had jumped at the opportunity to observe the interns at work, to collect materials and to receive a more elaborate brochure with ideas for preparing and following up on the visit.

Community groups--a teachers' association, cub scouts, retired persons--used the area more extensively in the second year. There were more requests from area teachers than time slots. Lessing saw this as indicating "there's a real need here; it's still untapped."

Further developments, future expectations. The workshop was to be continued in the summer of 1981. Lessing had already collected an impressive bulk of materials for that workshop and for the resource bank. Lessing had also got together with Goff and Janeway to write a grant proposal to the U.S. Office of Education in order to further develop the area. The basic concept consisted of teachers within a 100-mile radius attending a week-long workshop in nature studies, then carrying out an individual project in their home schools. Regional conferences would allow teachers in the same part of the region to exchange materials and experiences. There was also a provision for the project staff to circulate among participating schools in order to help with follow-up activities. Finally, the project would yield an extensive self-guiding tour for area teachers.

Lessing and Janeway had also designed a project to set up segments of the nature studies area for growing native prairie grasses, which had virtually become extinct in the area. Here as well, spinoff activities were planned. (It is important to remember that all these developments occurred over an 18-month period.)

Analysis. As in the other substantive serials at Arcadia there was a synergistic effect from the marriage of entrepreneurship, ingenuity, easy linkage with sources of expertise and support and a good sense of the educational "market" in terms of teacher needs. The project simply kept expanding and, in so doing, reached out to a wider public and consolidated institutional support systems while at the same time debugging and differentiating the activity itself.

The serial also illustrates some of the key variables and their links that were shown on the causal network for Arcadia. Figures 8-3 and 8-4 display these relations in somewhat simplified form, including all variables active in this serial. While there is no single stream running from antecedents to outcomes, there is a path along the bottom depicting the relationships between the teacher center and the state college. There is also a sequential trace along the school district stream leading to a high extent of use (24). Figure 8-4 continues the trace from use to the consequences of use: increased capacity (50) and practice improvement (51).

To translate the serial into the variables used for the causal network, we begin with the cluster of antecedent variables on the left side, then move along the college stream. The small scale of the site (4) and high number of informal links between local schools and the college (8) are illustrated in the informal webs linking the teacher center coordinator and his wife with Andrea and Steven Migros, then both with the science professor and the parks commission. University localism (12) is reflected in the interest of the college staff to operate in and develop the area and in the support from college administrators for such a project.

Starting next with coordinator ideology (6), shown in the influence of the Experimental Program on the approach taken to nature studies and to in-service teacher training, we move to the career-relevant incentives (13) of the coordinator: launching an enterprise which can help practitioners in the classrooms, can build up the resources and servicing capacity of the teacher center and can focus on an area in which the coordinator has both interest and expertise. This drives the energy of the coordinator (19), illustrated here in the proliferation of spin-off products, many of which involve a further strengthening of the already rich craft-usable resource base (18). Energy and knowledge

Figure 8-3. Development of the Nature Studies Area Project at Arcadia

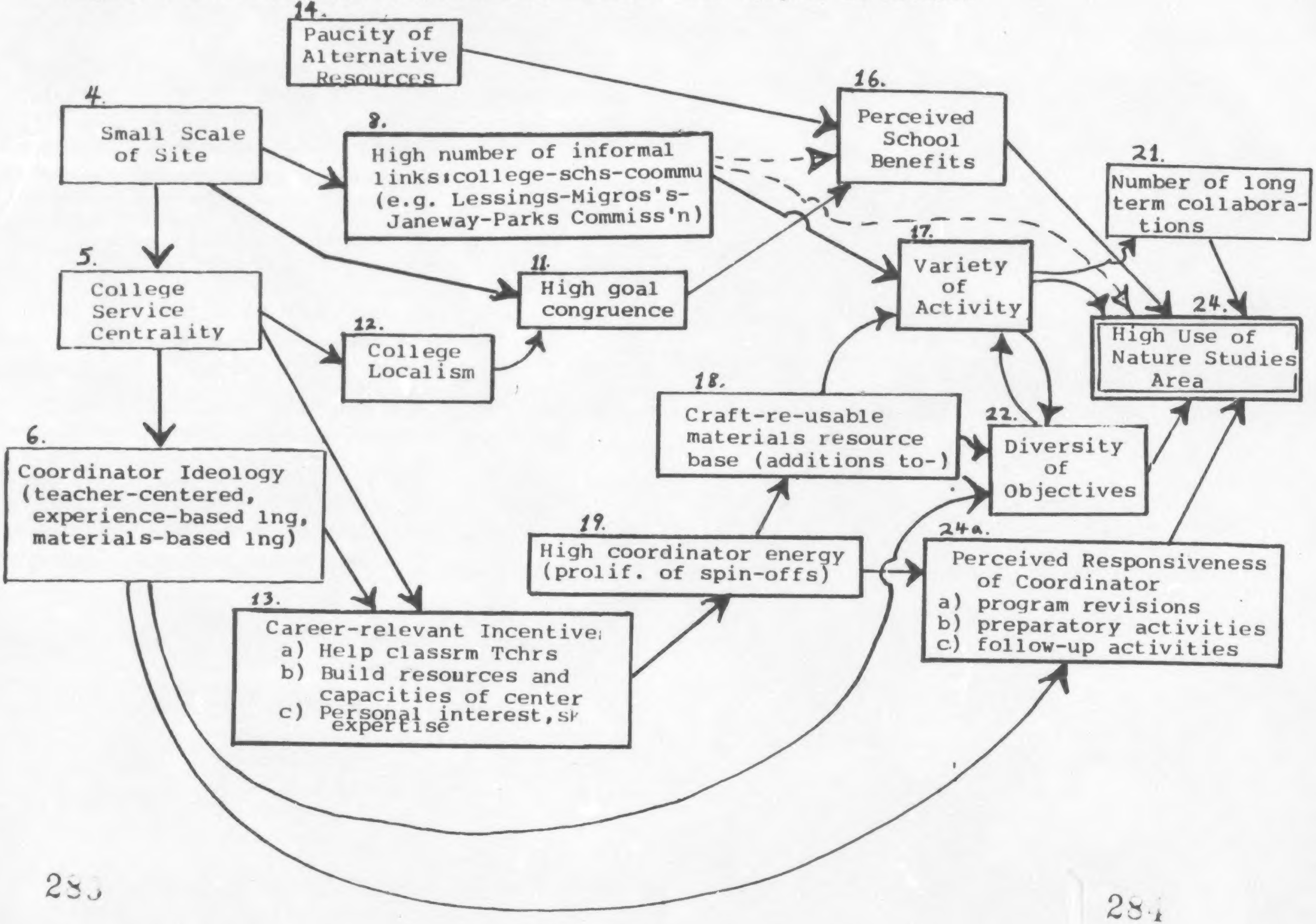
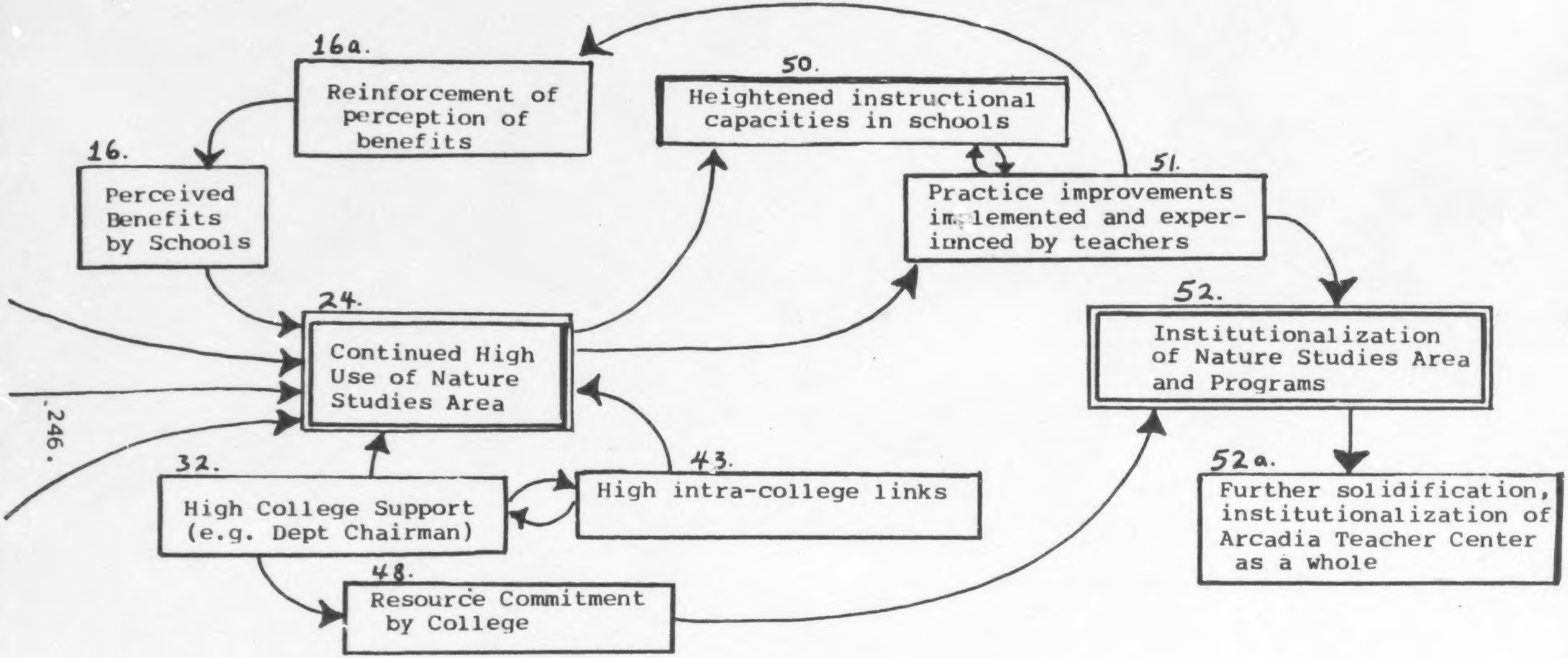

14. Paucity of Alternative Resources
4. Small Scale of Site
8. High number of informal links:college-schs-coommu (e.g. Lessings-Migros's-Janeway-Parks Commiss'n)
16. Perceived School Benefits
21. Number of long term collaborations
5. College Service Centrality
11. High goal congruence
17. Variety of Activity
24. High Use of Nature Studies Area
12. College Localism
18. Craft-re-usable materials resource base (additions to-)
22. Diversity of Objectives
6. Coordinator Ideology (teacher-centered, experience-based lng, materials-based lng)
19. High coordinator energy (prolif. of spin-offs)
24a. Perceived Responsiveness of Coordinator
a) program revisions
b) preparatory activities
c) follow-up activities
13. Career-relevant Incentive
a) Help classrm Tchrs
b) Build resources and capacities of center
c) Personal interest, sp expertise

Figure 8-4. The Nature Studies Area Project: From Development to Outcomes


16a.
Reinforcement of perception of benefits
50.
Heightened instructional capacities in schools
16.
Perceived Benefits by Schools
51.
Practice improvements implemented and experienced by teachers
24.
Continued High Use of Nature Studies Area
52.
Institutionalization of Nature Studies Area and Programs
.246.
32.
High College Support (e.g. Dept Chairman)
43.
High intra-college links
52a.
Further solidification, institutionalization of Arcadia Teacher Center as a whole
48.
Resource Commitment by College

resources also stimulate:

- the variety of activities (17), as the center moves from learning stations to ski and canoe trails, then to the summer workshop and prairie grasses;
- the diversity of objectives (22), shown here in the exploitation of the nature studies area for pre-service and in-service training, for the community, then for outreach to schools lying beyond the eight participating districts;
- perceived responsiveness (24a) of the coordinator in the revisions made in the program format and in the provisions for preparatory and follow-up activities; and
- number of longer-term collaborations (21), well-illustrated here in the creation of a curriculum resource that includes both preparatory and follow-up activity that can be used continuously and that can be integrated into other ongoing in-service programs, such as the summer workshop series.

Finally, following out the "college" stream, the serial illustrates how college support (32) from the department chairman acts to reinforce initiatives taken by the teacher center. Intra-college linkage (43) comes through in the several collaborations between the science professor, education department chairman and teacher center coordinator.

The stream corresponding to the school district is easier to follow as a linear progression. The rapid and widespread interest in the project reflects the relative paucity of alternative knowledge resources (14) available to area teachers. Perceived benefits (16) of using the nature studies area as a resource, curriculum enrichment and device to strengthen areas of instructional weakness are also well illustrated in the serial. The nature studies area thus gets added to drop-ins and participation in the workshop program and adds further resources to the materials resource bank, all increasing extent of use (24) of the center by area teachers. Enrichment of the science curriculum and filling in areas of weakness lead, in the eyes of participants, to heightened instructional capacity (50) and to practice improvement (51) in classwork in natural sciences.

8.3 CROSS-CASE COMPARISONS

We have presented the Nature Study Area serial in such detail to give a flavor of what happens when an inter-organizational arrangement is really working, but this case also exemplifies the general pattern which we find in all of our case analyses. Furthermore, it suggests an approach to cross-case analysis which simplifies presentation considerably. Figures 8-3 and 8-4 fairly cleanly divide the case history into two segments, the first leading up to the establishment and operational functioning of the IOA, and the second leading from that operational reality to outcomes. Thus, the one large causal network analysis for each case can be seen as two connected causal networks. Like Figure 8-3, Table 8-1 considers only those variable connections that lead up to "extent of use".

The first step in analysis was to select a set of variables that most clearly and collectively indicated that the arrangement had been fully implemented. Three variables together seemed to represent this fact. The first was "variety of activities" simply because there had to be a number of activities taking place to indicate that the IOA was truly operating. Secondly there had to be numbers of people from the districts and the university involved in these activities; thus, "extent of use" had to be included. Thirdly, it did not seem enough that such involvements take place; they had to be repeated and the persons involved had to be engaged in substantive activity over a period of time. Therefore, we included as a third item the "number of longer term collaborations." Taken together we refer to these three items as the IOA "Activation Index". As indicated in Table 8-1, the IOA was activated at a fairly high level at all five sites for which causal network analyses were developed.

The next step was to trace backward for each case to identify the variables which were direct antecedents of any of these three AI variables (suggested by the vertical arrows at the top of the table.) All of these direct causal connections are listed in this table. In addition, where one case indicated such a direct connection, we looked across the other four cases to determine if there were any indirect connections, i.e. variables which were causally related in a linear fashion through

Table 8-1 IOA Activation and Its Causes

Core Indices of Activation	East. Priv.	E.State Cardon	E. State Hanburg	MW State Tr.Rivers	MW State Arcadia
1. Variety of activities	high	high	high	high	high
2. No. of long term collaborations.	low/mod	high	high	mod/high	high
3. Extent of Use	mod.	high	high	mod.	high
Antecedents of Activation	↑	↑	↑	↑	↑
1. Diversity of objectives	mod	high*	high*	high	high
2. IOA staff responsiven's	[mod:1]	high*	[high*:1]	[high:1]	high
3. Perception of benefits by school personnel	[mod:1]	[high*:3]	[high*:3]	[high:1]	high
4. Leadership variables					
4a. Energy of leader/ coordinator	high	[high:1]	[high:2]	high	[high:1]
4b. Ideology of leader	high	[mod:2]	---	---	[high:3]
5. Linkage variables					
5a. Number of formal linkages-past	mod.	[high:7]	[high:8]	---	[mod/high:3]
5b. Degree of coupling	mod.	[low:1]	[low*:2]	---	[mod/high:2]
6. Teacher support	[mod:1]	---	---	high	[high ←]
7. Resource variables					
7a. Res. commitment- by university	---	mod.	mod.	---	---
7b. by school districts	[mod:2]	mod.	mod.	---	---
7c. external funds available	---	present [Fed Proj]	---	---	high
8. Quality of facilities	---	---	---	low	high
9. Codification	---	high*	---	---	---
10. Age of IOA	---	---	high	---	---
11. Mediated awareness of additional kn. resources	--	---	mod.	---	---

* = critical variable in this case

[ ] = indirect relationship to IOA activation variables

[←] = reverse causation indicated

[:1,2,etc.] = Number of variables intervening between antecedent and IOA activation variable.

intervening variables having more direct connections. The number of such intervening variables presumably indicates the strength of the causal connections, with fewer representing stronger connections. In a few cases, case writers judged a causal connection to be the reverse of what another writer had judged in another case.

The same procedure was used subsequently to trace connections back from outcomes. In the case of outcomes, however, we made three seperate analyses for each of the most substantial outcome categories, school practice improvement, capacity enhancement, and the institutionalization of the IOA.

It should be admitted at the outset that this approach has distinct drawbacks. First of all, each case writer developed his or her own causal path analysis using variables and connections that seemed most salient for that case. Secondly, the ratings were ultimately subjective and again determined seperately by each writer. The rationale here was simple: no one knew the case any where near as thoroughly as the case writer, who had conducted nearly all interviews , had made extensive on-site observations, and had spent months going over field notes and documentation. But what meant "high" on a variable to one writer might not have meant quite as "high" to another. Generally speaking, Levinson who prepared the Eastern State cases gave higher ratings than either Havelock or Huberman, yet on reading the cases one is struck by the power of the Arcadia case above all others. Furthermore the achievements of the Eastern Private network are remarkable in their own way since the IOA stretched across three states and a bewildering array of jurisdictions. These circumstances should be considered as we reflect on the meaning of the different "outcome" ratings. Finally, the judgement of what is directly related to what can be rather arbitrary. It may be more significant that all studies contained the same variables in some causal array than that they saw particular connections.

8.3.1 The Antecedents of IOA Development and Activation

Turning again to Table 8-1 we find eight sets of variables which are judged to connect to activation at more than one site, and there are three (#s 9, 10, and 11) which are directly related at one site but not indicated either directly or indirectly for any other case. One variable stands out above all others as being a common antecedent across all sites, a direct antecedent at all sites, and a key variable in its own right at two sites: "diversity of objectives". Although this was not an anticipated finding, it makes a good deal of sense on reflection. Nothing better reflects the nature of the "bargains" represented in these five settings than the diversity of objectives. It reflects the openness and flexibility of the IOA as a structure for getting things done for a range of different people with different needs and expectations.

IOA staff responsiveness, the second-listed antecedent, has a somewhat more indirect but still strong connection. Furthermore, staff responsiveness reinforces and leads to more diverse objectives. When we trace back further to the antecedents of both objectives diversity and staff responsiveness (in an analysis not shown in tabular form), we find that the energy of the leader/coordinator plays a critical role along with the coordinator's ideology, usually an ideology supporting high participation and self-determination by teachers. Thus the contribution of leadership variables (#4a and 4b in Table 8-1) is understated in the table.

Two other variable sets worth mentioning are "linkage" and "resources". Except for the Eastern Private case, linkage effects are indirect. At the Three Rivers site, linkage prior to activation was in fact very weak; thus the author understandably does not attribute activation to any linkage variable. Downstream, however, the weakness of prior links between the Three Rivers School District and the university undercut possibilities for institutionalization. It should also be noted that "number of longer term collaborations" is itself a linkage variable..In all sites we observed the general connecting thread that past linkages lead to present ones, to longer, and stronger links, and to the likelihood of the institutionalization of links.

One might have expected "resources" to have played a more prominent role in activation, yet only the Eastern State sites indicate that it is much of a factor. Upon reflection, we can surmise that IOAs can get going on the enthusiasm of their leadership and on the perception of multiple and diverse benefits. As we shall see below, "resource" variables play a very important sustaining role down the road.

8.3.2 The Antecedents of Outcomes

As explained in the preceding chapter, "Outcomes" were analyzed in each case and sub-case for three entities: the school district or schools which the arrangement was supposed to serve, the university or college of education, and the arrangement, itself. The designation of a particular variable as an "outcome" has to be somewhat arbitrary. On the one hand, any survivable manifestation of the arrangement and its activities could be construed as an "outcome" including continuing activities, linkages, attitudes, etc. on both the school and university sides. Table 8-2 summarizes outcome ratings for a subset of five indices, two for schools, two for the universities, and one for the IOA. The table suggests that greatest success was achieved across these dimensions at the two Eastern State sites and at Arcadia with results much weaker at Three Rivers and for Eastern Private. As noted earlier, however, Eastern Private was notable in expanding the number of linkages across a very complex array of districts in three states and in providing high quality knowledge inputs on a wide range of topics which could be "stockpiled" for future uses and practice improvements which could not possibly be tracked within the scope of our study.

Table 8-2 The Array of Outcomes: Summary Ratings

Outcome Variable	EaPriv.	ES-Card.	ES-Hanb.	MW-ThRiv	MW-Arcad
1. Practice improvements: school districts	lo/mod	mod/hi	hi	mod	hi
2. Enhanced capacity: school districts	lo	hi	hi	mod	mod/hi
3. Practice improvements: university/college	lo	lo	mod	lo	mod/hi
4. Enhanced capacity: university/college	lo	hi	hi	lo	mod/hi
5. Institutionalization of the arrangement	lo/mod	hi	hi	lo	hi

Of these five outcomes we decided to trace three to their direct and indirect antecedents as we had done for the "Activation Index"(AI). Table 8-3 displays the results of this tracing for antecedents of "School Practice Improvement". The table shows the three variables of the AI leading the list of antecedents, suggesting the obvious conclusion that a well-developed IOA with many activities, high rates of participation, and sustained mutual involvements will provide substantial and successful outcomes and will certainly pay off for the schools. Another important antecedent turns out to be another outcome variable, enhanced capacity, which was rated by Levinson as a "cause" of practice improvements in the two Eastern State cases, but was rated as one consequence by Havelock for Eastern Private and Huberman for Three Rivers. The other variables identified as antecedents (#s 5 to 8) all seem related to the notion of "linkage" in one way or another but they seem to be case specific factors. At Eastern Private the number and variety of links between the college of education and the districts, covering several administrative and staff levels in some inst-

Table 8-3 Antecedents of School Practice Improvement

	EastPriv	ES-Card.	ES-Hanb.	MW-ThRiv	MW-Arcad
Sch. Practice improvement rating ↑ ↑ ↑ ↑ ↑	lo/mod	mod/hi	hi	mod	hi
1. Extent of Use (AI)	mod	hi	hi	---	[hi:3]
2. No. long-term collaborations (AI)	lo/mod	---	[hi:1]	mod/hi	[hi:3]
3. Variety of activities (AI)	[hi:1]	---	hi	hi	[hi:4]
4. Enhanced sch.capacity (OC)	[lo ←]	hi	hi	[mod ←]	---
5. Links:sch-sch	lo(neg)	---	hi	---	---
6. Links:sch-univ.	hi*	---	---	---	[hi:1]
7. Links:degree of coupling (later)	---	---	---	---	hi
8. Awareness of additional resources (sch)	--	hi	---	---	---

* = critical variable in this case

[ ] = indirect relationship to outcome variable

[←] = reverse causation indicated

[:1,2,etc] = No. of intervening variables.

ances was an important and positive force for improvement. On the other hand there were relatively few exchanges among different schools and school districts within the context of The Council until the Writing Consortium got going and this fact undercut the positive influence of the many university-school connections.

Table 8-4 displays the antecedents of enhanced district capacity. The pattern has obvious similarities with Table 8-3. Level of practice improvement is the strongest antecedent across sites with the three variables from the AI also clearly important.

Table 8-4 Antecedents of Enhanced School District Capacity

Sch Dist Capacity Ra[illegible]g ↑ ↑ ↑	EastPriv lo ↑	ES-Card. hi ↑	ES-Hanb. hi ↑	MW-ThRiv mod ↑	MW-Arcad mod/hi ↑
1.Sch practice improv (OC)	lo/mod	mod/hi	hi	mod	---
2.Extent of use (AI)	[mod:1]	hi	hi	mod	[hi:3]
3.No. long-term collaborations (AI)	lo/mod*	---	[hi:1]	[mod/hi:1]	[hi:3]
4.Variety of activities (AI)	[hi:1]	---	hi	[hi:1]	[hi:4]
5.Goal changes:IOA	---	hi	present*	[mod:3]	---
6.Degree of coupling	[mod:1]	[lo:5]	[lo*:3]	---	hi
7.Links:sch-univ.	hi	---	---	---	[hi:1]
8.Aware add'l resources	---	hi	[mod:1]	---	---

(see Table 8-3 for symbols)

The fact that three of the sites changed their objectives as a way of adapting to their setting and gaining acceptance also appears to have added to school capacity.

Finally, in Table 8-5 we see case writer judgements of the antecedents of IOA institutionalization. It is here that we find the most complex and interesting array of "causes", most of them mediated. To reduce the complexity somewhat, we have tried to cluster the variables into conceptual "factors". Of these the one factor which is most consistently represented across sites is that of "resource commitment" both from the school and the

Table 8-5 Antecedents of IOA Institutionalization

	EastPriv	ES-Card.	ES-Hanb.	MW-ThRiv	MW-Arcad
Institutionalization: summary rating ↑ ↑ ↑	lo/mod ↑	hi ↑	hi ↑	lo ↑	hi ↑
1. Resource Factor					
1a. Resource commitment-university	mod.	[hi:1]	[mod:3]	[mod:8]	hi
1b. Resource commitment-schools	mod.	[mod:2]	[mod:3]	lo	[lo:3]
2. Other Outcomes					
2a. Practice improvement-university	---	lo	mod	---	mod/hi
2b. Practice improvement- schools	---	[mod/hi:1]	[hi:1]	---	hi
2c. Enhanced capacity school districts	---	hi	hi	---	---
3. Priority Factor					
3a. Institutional priority of IOA to school districts	(neg) [lo:1]	[hi:3]	[hi:4]	[lo/mod:3]	hi
3b. Teacher centrality	---	---	[hi:4]	lo*	[hi:2]
3c. IOA centrality to university	---	---	---	lo*	---
4. Linkage Factor					
4a. Sch-univ links (later)	hi*	[hi:1]	[hi:2]	---	[hi:2]
4b. Degree of coupling (later)	[mod:1]	---	[lo:2]	---	hi
4c. No. of formal links (early)	mod.	[hi:9]	[hi:8]	[lo/mod:4]	[mod/hi:5]
4d. No. of long term collaborations (AI)	lo/mod*	---	[hi:3]	[mod/hi:3]	[hi:3]
5. Goals Factor					
5a. Diversity of objectives	[mod:1]	[hi:1]	hi*	[hi:4]	[hi:3]
5b. IOA goal changes	---	hi	present	[mod:5]	---
6. Staff stability (IOA)	[lo:3]	---	---	lo	---
7. Codification of IOA	---	hi	---	---	---
8. Enhancement of power/status of college	---	---	---	---	mod/hi

(see Table 8-3 for symbols)

university. In The Council arrangement at Eastern Private both the university and the school districts contributed roughly equal shares, but neither contributed enough so that there could be a stable IOA staff. At Three Rivers the minimal contribution from the district meant inadequate facilities and shoe-string operations with uncertainty about the future from year to year. In contrast the high level of support from the college assured sustained activities at Arcadia. In both the Eastern State sites shared financial arrangements were carefully worked out according to long-established formulas.

As we might expect, institutionalization was also a function of successful outcomes generally at the three sites where these were experienced. Where the site was college-based (Arcadia), practice improvements in the college resulting from the IOA were a contributing factor to institutionalization. Where the centers were district-based (Eastern State), enhancement of district capacity was the key factor. At Eastern Private where such outcomes were weak or diffuse, they played a minimal role in the institutionalization process. Similarly, at Three Rivers, although fairly high levels of teacher involvement were achieved these did not play out in sustained focussed problem-solving or development activities from which visible payoffs would emerge in practice improvement and capacity. Thus neither outcome played into institutionalization to a significant degree.

A third aspect of Table 8-5 we call "the priority factor", consisting of variables indicating orientation or attitude of various parties toward the IOA. The Council clearly had low priority to its school district members, partly because of the relatively small impact of its activities on the district as a system and partly because most of its offerings were duplicated in one way or another by other service providers in the region or even their own staffs in some cases. At Three Rivers the administrators were indifferent to the teacher center and probably covertly hostile (as suggested by the abortive move to eliminate funding); they had no stake in it and may have seen it as a potential source of teacher militancy. On the other hand, the Three Rivers teacher center was not really central to the concerns of the teachers, themselves, as judged by the case writer, and this fact more than any other undermined the potential for institutionalization. This was coupled with the fact that the university had only sporadic concern for what was going on at the teacher center across town, even though it was its own stepchild. At Arcadia the center was a priority to the schools partly because the college itself was a central feature of the rather small community and partly because it was virtually the sole source of local pre-service and in-service training, materials, and expertise.

The fourth major set of antecedents we call"the linkage factor". The number of links at different levels established through the activities of The Council was a key factor in its strength and its continuance. Such links at Eastern State and Arcadia were also important indirect contributors to institutionalization. Historical linkage ("formal links early") also play some sort of role at all sites, direct and positive for The Council, very much mediated through other variables at the other sites. Surprisingly, however, the number of longer term collaborations is the only AI index variable that affects institutionalization directly, and this only for The Council at Eastern Private. It may be, however, that this "finding" is an artifact of the rating and causal network charting process.

Diversity of objectives, the most generally influential antecedent of activation of the IOAs, turns up again as an important antecedent of institutionalization, direct and strong in the case of Hanburg County. At Cardon, the ability of the Center to shift objectives in response to local conditions was an important contributor to institutionalization.

Staff stability was important at the two least successful sites, Three Rivers and Eastern Private. At Three Rivers, the double turn-over of coordinators in the first two years definitely weakened chances for institutionalization. At The Council the frequent interposition of substitute leadership and the turn-over of some staff fostered programatic discontinuity and uncertainty which indirectly undercut institutionalization.

Only two variables emerged as site-specific antecedents of institutionalization. These were codification at Cardon County and enhancement of power/status at Arcadia college. The Center at Cardon was a new actor in an old play. The pattern for teacher centers attached to the university had been worked out with several other county districts over a period of 15 years. The university initiators knew what would work and the formula which was imposed was one which was both adapted to local needs and tested elsewhere.

One element of the situation at Arcadia was competition with other state colleges and universities for students. The teacher center provided a means for increasing the visibility of the college for prospective future students and doing so in a very attractive way.

8.4 REFLECTIONS REGARDING THE CAUSAL MODELING PROCESS

With all the effort expended in causal modeling in each of the case studies and in this synthesis volume, we are left far from satisfied. It is clear enough, from a logical standpoint, that there are causes and effects and that one effect becomes the cause of another effect. It is also clear that most phenomena have multiple causes and multiple effects, all contributory, not all of equal importance. Such reasoning leads us to conclude that a valid and complete causal map of something as complex as an IOA would be extremely complicated, and further that it would be very difficult to compare one for one IOA at one time and place with another at another time and place.

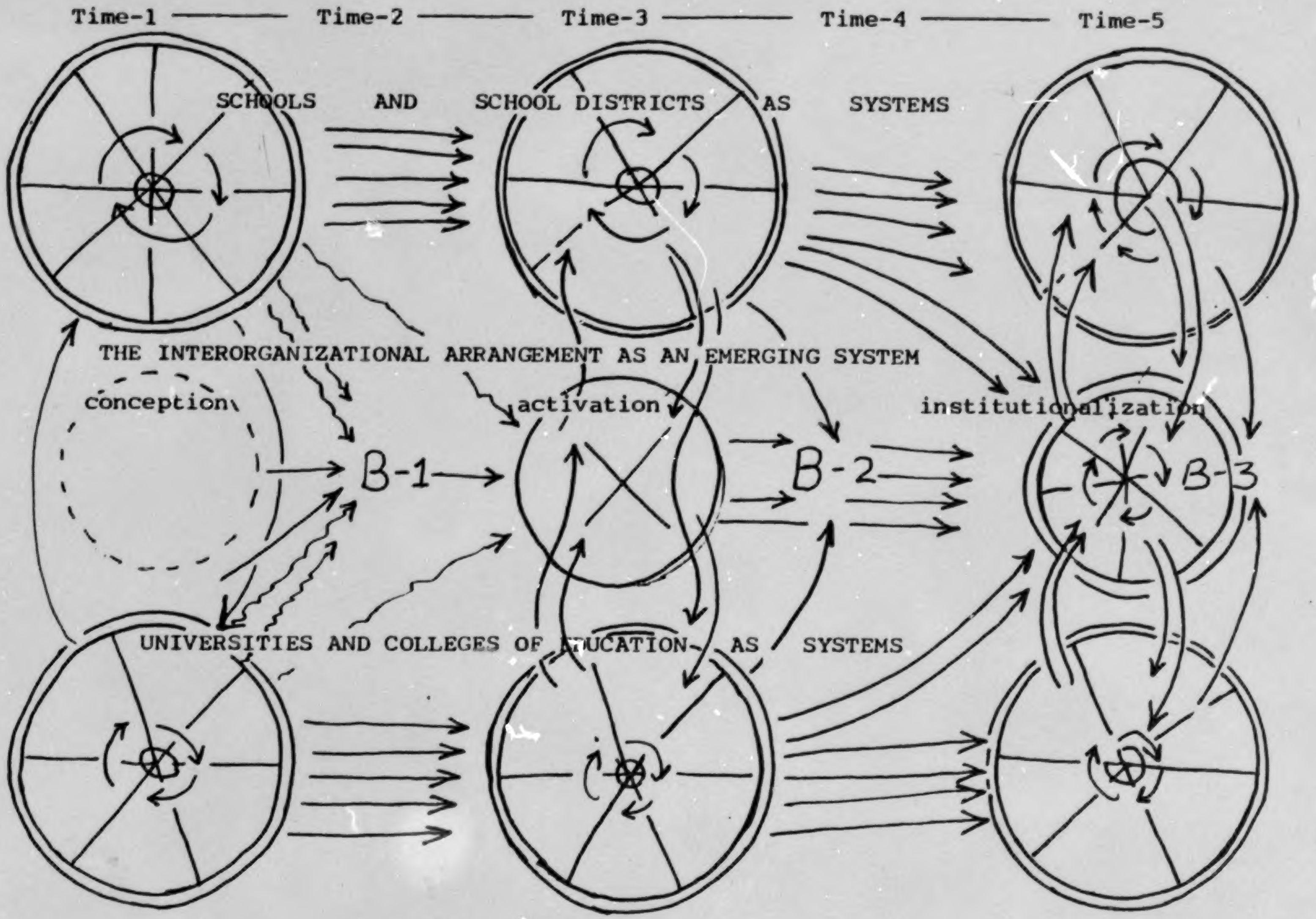
If we then go on to the tasks of measurement and then display, the problems multiply. The casual reader will already be overwhelmed by Figure 8-2, even though it is probably the most carefully worked out and accurate representation of causal variables in any of the cases. The process of causal modeling of case study material is positively crying out for simplification.

Two ways to approach such simplification are variable reduction and theory development. In the remainder of this chapter and in the next we will make tentative forays in both directions. However, the two paths cannot diverge too far. The one must be influenced by the other. In our cases we think we have succeeded in identifying most of the key variables and measuring most of these with reasonable accuracy, given the limitations of any case study methodology. Yet we clearly have too many and those we have emphasized may not be inclusive of those that are critical to a workable theory. Thus variable reduction is not merely an exercise in grouping, but a back-and-forth grouping, sorting, and interpolation of additional categories deduced from a theoretical model.

Figure 8-5 represents the essential elements of a general theory of IOA development. Like the causal network diagrams it has a vertical axis representing the school districts at the top, the university at the bottom and the "arrangement" in the middle. Along the horizontal axis time is represented in five phases. The first is the historic situation prior to the emergence of the IOA. The second is the period when elements are coming together which will lead to the creation of the IOA. The third is the "activation" as described in the previous section. The fourth could be called "immediate consequences of activation" and the fifth "the long term resolution". Each level at each point in time represents a systemic configuration which we could call "a social organization" in varying states of completeness and equilibrium. At time-1 we essentially have a two system configuration, each more or less complete unto itself with its own internal linkages, resources, objectives, leadership and membership, role structure, and division of labor. There may be some amount of commerce between the two systems and some amount of mutual dependence (e.g. supplying new teachers and administrators). Overwhelmingly, these various elements of each system are stabilizing, i.e. they are directed toward the maintenance of the system and a smooth and continuing relationship between each system and its environment. "Stabilizing" means that the forces within each system are aimed at preservation, such that it will be the same at time-2 and time-3 as it was at time-1. If they were the same, of course, there would be nothing for us to study because no IOAs would ever come into existence.

The story of the emergence of an IOA is a story of change, even of social creation. Thus there must also be a number of forces which

Figure 8-5 Outlines of an Integrated Theory of IOA Development and Institutionalization


Time-1
Time-2
Time-3
Time-4
Time-5
SCHOOLS AND SCHOOL DISTRICTS AS SYSTEMS
THE INTERORGANIZATIONAL ARRANGEMENT AS AN EMERGING SYSTEM
conception
activation
institutionalization
B-1
B-2
B-3
UNIVERSITIES AND COLLEGES OF EDUCATION AS SYSTEMS

work toward bringing about change. These we might call "catalytic" in that they intrude upon situations which are more-or-less in a steady state and destabilize them so that new connections and combinations can occur. When these new combinations have occurred, then the stabilization forces return quickly to dominance. Such re-stabilization may occur in two ways. First, and probably most commonly, the systems return to their former states like rubber balls reforming after a bounce. Secondly in some instances a new stable order is formed which incorporates the changes, turning them from temporary to permanent. This is the process which ends up in what we call "institutionalization".

In simplest terms the theory says that IOAs come into existence as a result of the confluence of catalytic and stabilizing forces. In part these catalytic forces arise from unstable aspects or destabilizing events in either the schools system or the university system or both. They also arise in part from new elements which enter the environment and may thus contribute to destabilization. In simple terms these elements could be called "needs" and "opportunities". At time-2 these elements come together in the form of an intersystem bargain, an explicit or implicit agreement to engage in a new relationship from which each side gains something and to which each side gives something. At time-3 the bargain materializes in the activation of the IOA. Up to time-3, catalytic forces are dominant in the formation of the IOA, but after time-3, if the IOA is to survive, stabilizing forces must converge on the arrangement such that one of three things happen: (1) it becomes a part of a redefined school district system, (2) it becomes a part of a redefined university system, or (3) it becomes a new system in its own right. Of these the third outcome is probably the most difficult and the least likely, and it is noteworthy that such an outcome does not appear among any of our cases or subcases. Arcadia clearly becomes a feature (and a central feature) of the program of the college. The Cardon and Hanburg centers are located in and largely "owned" by their respective county districts, and the Three Rivers center is likely to have severe institutionalization problems because of its "orphaned" status, not fully accepted as an element of the district in which it is housed and not fully embraced as a part of

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the university where it was spawned.

We get some notion of the nature of the initial bargain (B-1 in Figure 8-5) by reviewing the findings of Table 8-1. "Diversity of objectives" was the one variable that predicted activation across all five sites. In other words formation of the IOA was assisted by a perception from a variety of persons and groups that they might somehow find something to gain from the enterprise. The other variables in this mix of antecedents include high responsiveness of staff (catering to diverse and perhaps poorly defined needs) and energetic leadership. Special resource commitments and external funds were also notable factors. All these elements could be termed "catalytic". They were unusual, unlikely to be sustainable for extended periods, and in some degree destabilizing, indicating that the parties involved were dissatisfied with the status quo and reaching for something new. If there is an odd man out in Table 8-1 it is item #10 "age of IOA", but on reflection this may add something confirmatory to the theory. It is the Hanburg IOA at which age is credited as an important contributing factor to activation, but at Hanburg the IOA has already been fully activated some years before our study began! The implication is that we are looking at Hanburg at a later point in the process, probably at time-5 rather than time-3 or time-2.

The bargain, B-1 results in the initial activation of the IOA, but activation will also be conditioned by continuing involvements and commitments of personnel and resources from both the university and the schools. In the aftermath of initial activation there comes a second bargain, B-2 which represents the implicit or explicit mutual agreement to continue the arrangement through at least one more cycle (i.e. typically another school year). The strength of B-2 will be conditioned by initial perceptions of "success" on both sides, probably sensed in terms of satisfaction, degree of comfort and perception of the relevance and potency of activities regardless of their real impact. At B-2 stabilizing factors are already beginning to achieve some priority once more with questions such as "can we really afford to keep supporting this thing?" and "can we pull our teachers off their regular (more important) duties for such activities?"

As the IOA moves into its second, third, and fourth years surviving the B-2 scrutinies, it begins to be an expected and accepted part of the working world for both the university and the schools and school districts. At this point also returns are beginning to come in on the full range of experienced outcomes and benefits. If we now consider again the findings of Table 8-5 (Antecedents of IOA Institutionalization), we see a rather different configuration of "causes" than appeared for activation in Table 8-1. Resource commitment is now a factor across the board, meaning in this case the willingness of the two sides to sustain financial support over a period of years, Also important now is the perception of priorities vis-a-vis the IOA. How central has it become for each side. Then the linkages that have been developed appear as important antecedents. Codification and staff stability also suggest that the emphasis has shifted toward stabilization concerns and making the IOA something that is a part of the way things are routinely done.

So much for the theory development. What about variable reduction? Let us turn again to Figure 8-5. The figure could crudely be described as consisting of a 3x5 matrix in which each cell represents a system at a particular point in time. Following general systems theory we would propose that all systems share common properties at some level of abstraction. If they are all social systems as, indeed, these are, we can lower that level of abstraction considerably and say for example that all will consist of interpersonal linkages. All will have leaders and members. Each will be characterized by norms, i.e. shared attitudes, expectations, priorities, etc. To a degree they will have shared goals and objectives. They will also have characteristic activities and procedural routines, outputs and outcomes, and they could each be characterized as having attained a certain level of stability within themselves and in commerce with their respective environments. We have seen throughout the study how various university and school characteristics and outcomes mirrored each other and also how various features were identified temporally as belonging to the "historical period", "early development" or "later development". Here, too, there was a clear conceptual correspondence. In Table 8-5 in particular an effort has been made to cluster variables into conceptual groupings which cut across time and organizational dimensions. We do not plan to carry that exercise further at this point. Rather we will reserve to the next chapter an analysis of what seem to shake down as the essential concepts of the study, and will propose how they come together in an over-all theory, building on Figure 8-5 and the related discussion of pages 259 through 263.

PART NINE: CONCLUSIONS

Network phenomena are probably among the most difficult subjects for research that there are among the social sciences. Even after some 900 pages of edited text on top of many hundreds of pages of field notes we are not sure we have captured the full essence of these arrangements. There were many kinds of analyses which we hoped to perform which were eventually cast aside for various reasons: incomplete data, uncertainty about meaning and value, and simply a need to get on and finish the task within reasonable limits of time and length. In the end we realize on the one hand that there is not enough here for sound empirical comparisons and conclusions but on the other hand a little too much for anyone to absorb and synthesize into a coherent picture of the whole. Hence the vital need for a chapter which tries to put the whole together in a few pages. What follows is partly summary of what has come before and partly a reflection on meanings and a highlighting of what appear to be the major lessons of this study.

The first and most obvious purpose of this study was descriptive; to describe what an interorganizational arrangement is like which involves a university and a number of schools and school districts. Thus we will first summarize this descriptive understanding. Then we will identify the most salient of the outcomes, thus establishing the purpose and value of considering such phenomena as IOAs in such a detailed way. Third we will summarize what appear to be the most prominent cause-effect relationships, deriving much of this from the "causal network analysis" diagrams and discussion which occur in each volume of the study. The causal analysis, in turn, defines the sets of variables which appear to be most important in understanding outcomes. Most prominent among these are the linkages which can be seen simultaneously as the elements of IOAs, their precursors, and their outcomes. IOAs also appear to be held together by bargains, bi-laterial or multi-lateral agreements to exchange items of perceived value and benefit to the receiver. We have also

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found that in many instances the key ingredient in activating an IOA to achieve substantial outcomes and to settle on appropriate and lasting bargains is leadership, probably leadership of a special kind which fuses initiative and energy with a clear sense of purpose and the capacity to inspire trust from colleagues and enthusiasm from followers.

Finally, in the concluding section of this chapter we will try to put these elements together in an over-all scheme which traces interorganizational arrangements from their roots to their development and full activation to their institutionalization. We will reserve to the short final chapter (Part Ten) a consideration of what all this might mean to various actors on the education scene.

9.1 INTERORGANIZATIONAL ARRANGEMENTS: WHAT ARE THEY?

We sought out three IOAs which we thought would be comparable in a number of respects. Notably they each involved a college of education and a number of school districts. Each arrangement was at least three years old; actually the youngest, Midwest, was founded in September of 1977; the oldest, the Council, was founded in 1940; and the Eastern State network began with the establishment of a teacher center in a district in 1967. Thirdly, and we thought, most significantly, each existed without any input from federal funding.

As it turns out, we need to qualify each of these characteristics considerably. For example, the Midwest arrangement actually involved a two layered network. The state-wide network which we originally came to study involved the state university of a large but thinly populated state in the northern prairies and a number of smaller four year colleges spread about the state. Each of these institutions was to establish its own local network, supported largely with local resources but supplemented for a five year period with funds from a foundation grant. State-wide coordination and planning was very loose. We selected two of these decentralized arrangements for special study. One involved a small community college in a rural area and the other the state university itself with the community in which it was situated, a rather small city but one of the larger population centers of the state. The structure of the Eastern State network was also two tiered but involved no other institutions of higher education. In this case the State University entered into contractual relations with school districts which in this state are organized by counties. Each district is thus fairly large and most are highly populated (from 100,000 to 500,000 residents or more) with many schools at each level. The arrangements which were bilateral between the university and the district, called for the creation of a new institution, the teacher center, which would be jointly staffed, supported, and managed by the university and the district, but located in the district on school property. The Eastern Private university maintained an arrangement which was much broader and less articulated structurally. School districts in a three state area bought annual memberships for a small fee for which they received a range of services usually provided in workshop form but sometimes involving publications and field visits. Involvement of members varied considerably and membership fluctuated as districts opted in or out in a given year, these oscillations not greatly affecting the whole enterprise.

Before going on to consider the nature of activities there are three descriptive variables which have some interest. One is the structure, itself. A second is the degree to which the structure is formalized, and the third is the scale of the enterprise.

9.1.1 Structure

What difference does structure make? Probably a great number of alternative structures can serve the same purposes and the same structure can succeed in one instance and fail in another. The structure of "The Council," the Eastern Private arrangement, was essentially the same over a 40 year period in which it was sometimes thriving and sometimes struggling for existence. It allowed easy entry and exit for a large number of independent districts. It also may have militated against a more serious and concentrated type of commitment which might have gone much further toward problem-solving and practice improvement by whole schools and districts. Having a central office on-campus gave good access to the very and diversely talented faculty of Eastern Private and during the heydays of the 1950s and 1960s allowed the development of a research enterprise which was impressive for its time. In the Eastern State case, there is a university office but the real action seems to occur in the decentralized teacher centers. Being located in the district greatly facilitates teacher access both logistically and psychologically and probably explains why more teacher sharing of practices and a greater sense of ownership occurs under this pattern as demonstrated both at Eastern State and at the Three Rivers site at Midwest. But real teacher ownership could also be achieved with an on-campus site as illustrated at Arcadia. Thus there appears to be no strictly structural variable within our limited range of studies which stands out as of great importance.

9.1.2 Formalization

All sites represent formal arrangements in the strictest sense. Membership involved written agreements mutually signed. However, there was a considerable range among sites in degree to which such formalization was taken. Probably the site with the greatest degree of formalization was Cardon County in Eastern State but this was not a site with a record of successful outcomes which would make it stand out from the others. Most significant outcomes seemed to emerge out of situations which developed spontaneously without a great deal of planning and structural forethought. Even at Cardon structure did not predetermine program content, however. In Eastern State there was a near obsession with the process of selecting Center Coordinators. There were national searches and carefully balanced selection committees. Results of such a process were good but leadership here was not noticeably superior to that at other sites where leadership was either by self-nomination or happenstance. There were governing and advisory boards associated with each IOA and in the case of Midwest and Eastern State there was one such board for each of several centers. Representation on boards was usually carefully balanced with administrators, teachers, and university/college representatives. The exception was Eastern Private where all board members were district representatives and all but two were superintendents. Nevertheless, no obvious differences emerged from board composition and no great importance could be attached either to the existence or composition or functioning of a board. Generally, it seemed that boards existed to affirm and legitimize decisions and arrangements already developed informally by the secretariat, coordinators, and other key actors.

9.1.3 Scale

It is important to keep in mind that the areas covered by the three IOAs were vastly different in terms of geography and numbers served. Within Eastern State one county studied was essentially small town and rural while the other was affluent suburban. Of the many communities served by Eastern Private most were affluent suburban but some were medium sized cities with a cross-section of income levels and ethnic groups. Midwest was relatively thinly populated rural, small town, and small city. Of all sites studied the most dramatically and convincingly successful was Arcadia, the most rural and least populated of all the sites and the one most isolated from various types of educational resources. Thus in the causal analysis the case writer identified "small scale" as an aspect which may have enhanced effects. It was a small community in which almost everyone knew everyone else in one way or another; it was a small college in which the same was even more true; the college was a central feature of the community in which local pride was invested. These were all aspects of the situation which enhanced effects once the innovative center program was launched. At larger sites, there is likely to be more going on, more conflicting purposes, less saliency to the IOA enterprise.

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Scale may also have a biasing effect on the case study process. Small scale sites are easier to study for many of the same reasons: IOA-related events stand out more in peoples' minds; key actors are more likely to be known to respondents; there are fewer confounding and complicating factors to cloud interpretations.

9.1.4. The Activity Mix

The predominant activity at all three sites was the training of teachers through workshops, courses, and supervised experiences. At Midwest and Eastern State there was always provision for formal credits for such involvement; at Eastern Private there was none. At Eastern State the bulk of effort had traditionally been devoted to the provision of supervised internships for teachers-in-training (pre-service) and this was also an important aspects of the work at the Arcadia site at Midwest. At both sites such pre-service training was the initiating rationale for the teacher centers with in-service gradually assuming greater importance as the centers broadened their programs and as pre-service enrollments declined.

On-site expert consultations were also offered at all sites but only assumed importance at Eastern Private where the "Fellows" program involved bi-monthly visitations by graduate students with some training in school problem-solving. Even at Eastern Private, however, this practice lapsed after two years. Coordinators of centers at Eastern State also occasionally engaged in problem-solving activities with school district personnel which went beyond the level of individual training, but these activities never assumed major importance during the period of study.

Eastern Private was the only site which made continuing and serious efforts to involve levels of the school system above the teacher, notably providing conferences for superintendents and personnel in a variety of administrative and staff roles, and sporadically providing special workshops for principals.

All sites engaged in minor activities in publication, usually via newsletters, and one center, Arcadia, became a materials resource center for teachers, an activity which assumed major importance at this site and became a magnet for teacher involvement in all kinds of other activities. Partly as a result of this resource base the Arcadia center also became a place where materials were adapted and even developed locally by teachers. There were some developmental activities of this sort at Eastern Private under the writing consortium and in connection with the field work of two or three fellows at particular district sites. There was no serious research activity at any of the three sites, in stark contrast to the research factory which was the old Council of the 1950s and 1960s at Eastern Private.

Indeed, the contrast to the old Council is striking in many respects, not simply with the revived Council but with all the other contemporary networking efforts which we have studied. The old Council concentrated its change efforts on the top, limiting conferences and research data feedback sessions to superintendents with no substitutes allowed (they could almost always count on near 100% attendance). Data was rigorously collected and carefully reported to member superintendents and later to a larger public through conferences and publications. The purpose of reporting sessions was explicitly practice improvement through the adoption of new educational practices and the utilization of data for system diagnosis and measurement of progress.

9.1.5 The Transfer of Knowledge

In Part One of this volume we suggested that the arrangements studied were especially important because of the unique potential of the university as a societal knowledge resource and the possibility that through a special intermediary arrangement this potential could be more fully realized. We also noted that such linkages could be bilateral knowledge transferring mechanisms through which the university could also achieve further enlightenment from more intense contacts with real world problems and settings.

On the whole we have to arrive at a somewhat disappointing conclusion, particularly on the latter. It is true that all IOAs functioned effectively as knowledge transfer mechanisms, but the bulk of this knowledge was passed from the universities to individual school teachers through traditional workshop and course formats. Furthermore, such exchanges typically involved only a small number of faculty who had special interest in outreach, not the faculty as a whole or the college as a system. The exception was Arcadia, where multiple faculty involvements gradually increased as more and more faculty realized the potency of the center and as teachers became more and more proactive in resource seeking efforts.

One reason for the lack of more substantial transfer of research-based knowledge might have been the strong orientation toward craft knowledge and teacher-to-teacher exchange that characterized both the revived Council under Loveland and the entire state-wide network at North Central under Dean Saganne. Ideology did not always play out in action, however. Despite a good deal of lip service to the idea of teacher-generated knowledge, Table 9-1 reveals that this was only a strong aspect of operations at one of the five sites for which detailed analysis was made. The table indicates that for the most part reliance was placed either on the college or university or the IOA staff for knowledge inputs.

The other noteworthy aspect of Table 9-1 is the nearly complete dependence on local resources, i.e., those contained within the IOA membership itself. This was also true for the historic Council. But in that case the craft knowledge being shared was codified and systematically filtered and evaluated. In contemporary sites, collection and codification of experience is more sporadic and less sytematic although it did occur in Hanburg County and in the Writing Consrotium. Research as such was rarely conducted through these contemporary IOAs and while research knowledge was exchanged it is not clear that it had any special status or emphasis at any of the centers.

Table 9-1 Sources of Expertise in Training Events and Projects at Five IOA Sites.*

Source of Expertise	Ea.Priv.	MW-TRiv.	MW-Arcad	ES-Han.	ES-Card.
staff of intermediary agency (teacher center)	.14	.05	.45**	.50	.40
substantive specialists from inside state/immediate area	.12	.19	.22	.09	
college or university staff in IOA member organization	.43	.30	(.45)**	.30	.49
staff from other nearby colleges or universities	.04	.05	.08	.00	.04
specialists from outside state or immediate area	.08	.02	.08	.00	.00
local teachers in IOA member schools	.16	.30	.06	.10	.10
teachers from outside state/immediate area	.00	.02	.08	.00	.00
college/ university staff from outside state/ immediate area	.03	.00	.02	.01	.01

*Based on newsletters, printed schedules and annual reports.

**IOA staff were College faculty members

Knowledge content was extremely diverse, including reading, writing, mathematics, science, social studies, environmental studies, and so forth. All sites and all centers within sites were able to provide this kind of range. Only The Council (Eastern Private) provided knowledge related to diverse aspects of schooling that would be of interest to administrators and other non-instructional staff, e.g. legal matters, school structures, networking, evaluation, and socio-cultural trends. Furthermore, only The Council made serious efforts to involve principals and superintendents in workshop activities though these efforts were not always very successful. There was also some interaction at Cardon County between the Center Coordinator and the administration on a substantive change issue, bridging between elementary and middle school.

9.1.6 Innovative Instructional Improvement Modes

Although traditional modes of transfer such as workshops and academic course for credit were the dominant activities of most IOAs most of the time, there are also a number of exceptions. Instances were found at all five sites examined in detail of non-traditional improvement modes. Of these, six are particularly noteworthy: teacher-to-teacher exchanges, materials development, self-guided learning and materials use, practice observation and modeling, individual problem-solving, and group or system problem-solving. Both Eastern Private and Midwest had a strong underlying ideology of teacher-centeredness which posited teacher craft knowledge as a prime resource and exchange among teachers as professionals of equal status as the most valued mode of learning. Nevertheless, in actual practice during the period studied, few activities undertaken at Eastern Private involved extensive and substantive knowledge exchange among teachers. At the Three Rivers site in Midwest, on the other hand, teacher-to-teacher exchange became the dominant mode with teachers taking on the instructional role with other teachers, thereby enhancing personal pride and status as a professional and an expert in the instructional process. The results were not always positive, however, as such sessions were sometimes judged by participants as less valuable than sessions with outside experts and some doubt attended the self-proclaimed expert status of many of the teacher-instructors. At the Arcadia site the teacher exchange ideal was muted and center staff assumed the major instructional role with good effect. Nevertheless at Arcadia, an atmosphere was created of a very comfortable drop-in-and-browse setting in which many informal contacts were made between teachers and faculty and among teachers. The Eastern State centers also had this drop-in mode of operation but it never assumed the same importance as it did at Arcadia. Eastern Private had no such drop-in capacity, having no real "center" to which teachers could go and feel confortable even on campus.

Arcadia was also by far the most active site in terms of development of materials by teachers for their own use. At Eastern Private there was some amount of this within the Writing Consortium but the most valued inputs came from university experts and district curriculum personnel who had extensive prior experience in developing such materials for their own use. At Eastern State individual coordinators were frequently active in program and curriculum development activities which they then used as the basis of promotional dissemination and instruction as well as problem-solving projects.

Again with self-guided instruction amd materials use, Arcadia was by far the most outstanding site, having the strongest focus on the center as a comfortable place for teachers just to come and stay a while and browse through the material that was there. This outcome was greatly enhanced at Arcadia by the richness, quality, and diversity of the materials, themselves, and the uniqueness of this resource in the geographic area.

We found evidence that observation and modeling of teaching practice in the classroom and special settings with pupils was an extremely valuable and potent type of outcome which could be fostered by IOAs. At Eastern State this was a primary mode of activity in that the centers were initially established to improve student teacher placement and supervision and to involve local districts more seriously in the process. Practicing teachers frequently reported that the presence of student teachers was a regenerating force for themselves, making them more conscious of their own teaching styles and more concerned about improving practice and maintaining a high standard of practice. At the

Arcadia site a major element in inducing new practice and practice improvement was the opportunity for teachers to observe student teachers experimenting with new practices taught on campus with whole classes or part classes brought to the center for this purpose. Such casual observation was sometimes the opening wedge motivator for seeking new materials and professional growth experiences through the center.

Both at the Arcadia site and the Hanburg County site, opportunities were provided for teachers to engage in individual problem-solving with guidance from faculty and center staff. A tendency was noted at Arcadia for teachers to gradually shift into this mode after stimulation by more formalized courses and workshops and informal materials browsing and observation of student teachers in action.

Problem-solving at a system level, i.e., involving whole schools, districts, or units larger than one classroom, were generally not the focus of IOA activity although instances were noted in the most recent phase of the Cardon County site in Eastern State (the bridging serial) and more extensively in the early phases of the Council revival when the Fellows program was in full swing. As conceived and first implemented, each of the ten or twelve Fellows was to be assigned to a particular school district with a broad assignment of assisting in problem-solving in collaboration with local administrators and staff. Several Fellows saw themselves as process specialists and catalysts for self-directed practice improvement within the district, particularly by teachers working in groups or teams. The Fellows program did produce at least two cases where this kind of activity worked well to produce significant system improvement outcomes but it was a process that proved difficult to stabilize or generalize. Such system-wide problem-solving was, of course, a hallmark of the original Council as previously noted and the outcomes over the generation in which the Founder of the Council presided were very widespread and substantial in terms of numbers of innovative practices adopted in numbers of school districts nationally as well as locally. The original Council was also successful in diffusing itself as a model for educational practice research and change, leading to the establishment of numerous "schools councils" attached to other major universities across the country. None of the contemporary IOA sites studied appear to have reached the stage of articulation or notoriety which would lead to such dissemination, although under the Carter regime in the late 1960s, the Eastern State IOA was achieving some national recognition as a model just prior to the dismissal of Carter and the revamping and retrenchment of the program.

9.2 THE ARRAY OF OUTCOMES

Despite what might appear from the above as the rather modest scope of activities, all the IOAs studied must be judged as very successful by a number of criteria. Each succeeded in building new interpersonal linkages and strengthening old ones between university personnel on the one hand and school personnel on the other. Additionally, linkages were strengthened within the universities studied and among the school teachers, administrators, schools, and school districts studied in all cases. The content of almost all these linkages was directed toward the improvement of the educational enterprise in one way or another. The most obvious and quantitatively impressive outcome was thus knowledge gained by several hundred school teachers at all elementary and secondary levels.

Our analysis of outcomes in Part Seven of this volume includes consideration of a range of items other than linkages and knowledge transferred. Also included were degree of status or power enhancement, capacity building, and practice improvement. Furthermore these dimensions were assessed at both the individual and the organizational level and for the schools and their staffs on the one hand and for the universities and their staffs on the other. Unfortunately the data collected could not provide much convincing evidence for such a grand analytic scheme , and for the most part we had to fall back on the partly subjective judgements of the case writers. However, there were some stand-outs.

Status and power enhancement of individuals was probably an important hidden motivator for many teachers at all sites. At Eastern Private, by attending Council workshops they gained association with a prestigious university and many of the "big names" of education. At the Council this was also a significant benefit for superintendents and principals. At Eastern State and Midwest State these status benefits were more specific and tangible in the form of course credits toward advanced degrees and, for some, status as "Adjunct Professor". Very significantly no such status-enhancing benefits were realizable by most participating university personnel. The one outstanding exception was Arcadia College which found that the teacher center put it in a much stronger competitive position in the local area for recruiting new students.

Table 8-2 in Part Eight (page 252) summarizes ratings on five other dimensions across five sites. Practice improvement and capacity enhancement were most obvious at Arcadia, Hanburg, and Cardon and least obvious from the Council's activities. This is not judged to represent a failing on the part of The Council but rather the diverse and far-flung nature of its constituency, teaching and adminstrative levels in 20 or more districts in three states.

Solid and continuing beneficial outcomes at the two Eastern State sites reflect both the age of the basic arrangement structure at Eastern State University and the very concrete and practical nature of the bargain which holds between participating counties and the college of education, namely that teachers will be trained and that the college will get the revenue from enrollments. A similar bargain pertains at the Three Rivers site but here it does not have the same stabilizing effect because of a lack of involvement by administrators and a sense by the latter that their own power and rightful responsibility have somehow been usurped.

However, it was really at the Arcadia site that beneficial outcomes soared with teachers talking in terms of "rejuvination", and "revitalization". Most teachers interviewed at this site claimed they were significantly more effective in the classroom as a result of using the center and participating in its programs. It also seemed to lead to higher aspirations and the motivation to achieve them through the center. More specifically they reported more pupil self-direction, individualization, and curricular integration through such center-initiated programs as the nature studies area. The case writer felt that there were two particular aspects of this site which enhanced these positive effects markedly: (1) the opportunity provided to observe student teachers at the center practicing new instructional approaches with small groups of their own pupils, and to do so at close range in the informal and supportive atmosphere of the center, and (2) the availability and easy access to an ever-augmenting materials bank, unique in the region.

With the possible exception of Arcadia none of these IOAs represents anything very revolutionary for either the colleges and universities or the schools. Improvements and benefits were significant but well within the range of the expected and perhaps within the range of what might have happened for many of the individuals involved whether the IOA had existed or not.

In assessing outcomes, we also took serious notice of the staying power of each site and sub-site, the extent to which the IOA had embedded itself as an institution, routinized its delivery of services and stabilized its resource base. We called this "institutionalization" and it consists of 23 separate variables which each case writer judged on a five point scale after completing his or her analysis. Those judgements are summarized in Table 9-2. Scalar values are as follows:

"present" = 4
"partly present" = 3
"weak" = 2
"dubious" = 1
"absent" = 0

d.k. = "dont' know," i.e., the case writer lacked sufficient data to make a judgment.

n.r. = not a relevant issue for this case

Each column represents judgements for a site or sub-site, abbreviated as follows:

EP = Eastern Private
ES = Eastern State
M = Midwestern State
WCEP = The Writing Consortium at Eastern Private which evolved as a separate sub-system under the aegis of The Council.

MA = The Arcadia site at Midwest

MTR = The Three Rivers site at Midwest

ESC = The Cardon County site at Eastern State
ESH = The Hanburg County site at Eastern State

To a large extent this table serves as a short-hand summary of all outcomes. The first set of variables, labeled "supporting conditions," represents a kind of performance chart for each IOA, whereas the "passages" and "cycles" dimensions (derived and adapted from Yin, et al., 1978) indicate the degree to which the IOA had become a routine fixture with a high probability of continuance.

Table 9-2 The Elements of Institutionalization*

	IOA sites			IOA sub-sites					
	EP	ES	M	WC EP	MA	MTR	ESC	ESH	$\bar{X}$
Supporting Conditions									
Considered a core function • within local schools	2	3	2	1	4	3	2	3	2.5
• within the college/university department or faculty	3	3	2	1	4	3	3	3	2.7
Used on a regular or daily basis	4	4	2	0	4	3	3	3	2.9
Provides benefits/payoffs to: • school administrators	4	3	4	1	4	4	4	3	3.4
• teachers	4	4	4	3	4	4	3	4	3.7
• university staff	2	3	d.k.	2	4	2	2	2	2.4
• IOA staff	4	4	3	4	4	3	4	4	3.4
Outperforms or eliminates competing practices	3	d.k.	d.k.	2	4	4	3	4	3.3
Receives support from: • district administrators	4	4.	2	3	4	2	4	4	3.4
• school building admins.	d.k.	4	d.k.	2	4	3	4	4	3.5
• college/university admins. and deans	2	3	d.k.	2	4	4	4	4	3.3
• state-level administrators	n.r.	d.k	3	n.r.	n.r.	n.r.	d.k.	d.k.	
Passage Completion Achieves stable funding source	3	3	0	0	4	2	3	3	2.2
Functions performed are certified by: • school authorities	0	4	4	0	4	4	4	4	3.0
• college/university auths.	0	4	4	0	4	4	4	4	3.0
Supply and maintenance provided for	3	4	2	0	4	2	4	4	2.9
Organizational status is formally established in regulations • within school district	2	4	d.k.	2	0	3	4	4	2.7
• within university	3	4	d.k.	2	4	3	4	4	3.4
Cycle Survival Survives annual budget cycles	4	4	1	3	4	2	4	4	3.2
Survives departure or introduction of new staff	2	3	2	3	** n.r.	2	4	3	2.7
Achieves widespread use • in school district	2	4	2	2	4	3	4	4	3.1
• in department, faculty of university/college	2	3	2	0	4	0	2	2	1.9
• in State	2	3	2	n.r.	n.r.	n.r.	d.k.	d.k.	2.3
Sum of Ratings on all elements	55	78	41	33	76	60	73	74	
Mean rating	2.62	3.71	2.41	1.57	4.00	2.86	3.48	3.52	

---

* see adjoining text for symbols; ** not yet tested at this site.

Of the three main IOA sites Eastern State seems by far the most secure, having a solid and now time-honored niche in the college of education, state support, and strong backing from the districts and their administrators. In contrast the state-wide network at Midwest is still struggling to find a secure financial base and is less recognized by local districts as the key supporting element for the local teacher centers. The Eastern Private IOA has a long history of survival and enthusiastic support from some school administrators but it also struggles for solid and continuing financial support. It is especially weak in not delivering services to members which are certified for credit either by the university or the districts.

Moving to the sub-sites we see an even greater range. The strongest site in performance terms and support conditions is Arcadia with a perfect score. Indeed, these ratings understate the superiority of the site as a provider of personal and professional growth to teachers. Yet when we turn to the routinization variables both Eastern State county sites appear slightly more robust because Arcadia has no institutional status within the districts it serves and because it has not yet met the test of leadership turnover. The Writing Consortium, in contrast to all other sites, clearly has not achieved institutional status. It exhibits the profile we might generally expect from a special project or program which is time-limited (temporary system) even though it has survived through a three year period, has received some special set-aside support from districts, and has produced a continuing series of workshop meetings with a core consistent membership.

Turning to the summary scores for each dimension (row means in Table 9-2) we also find some noteworthy patterns. "Provides benefits to teachers" is clearly the strongest aspect across all sites, followed by benefits to school administrators and IOA staff. Much less certain are benefits to university staff other than those directly involved with the IOA, yet when we look down to the routinization items we find that organizational status is more firmly fixed within the university than it is with the districts. Widespread use is also judged to be greater among districts than within the university.

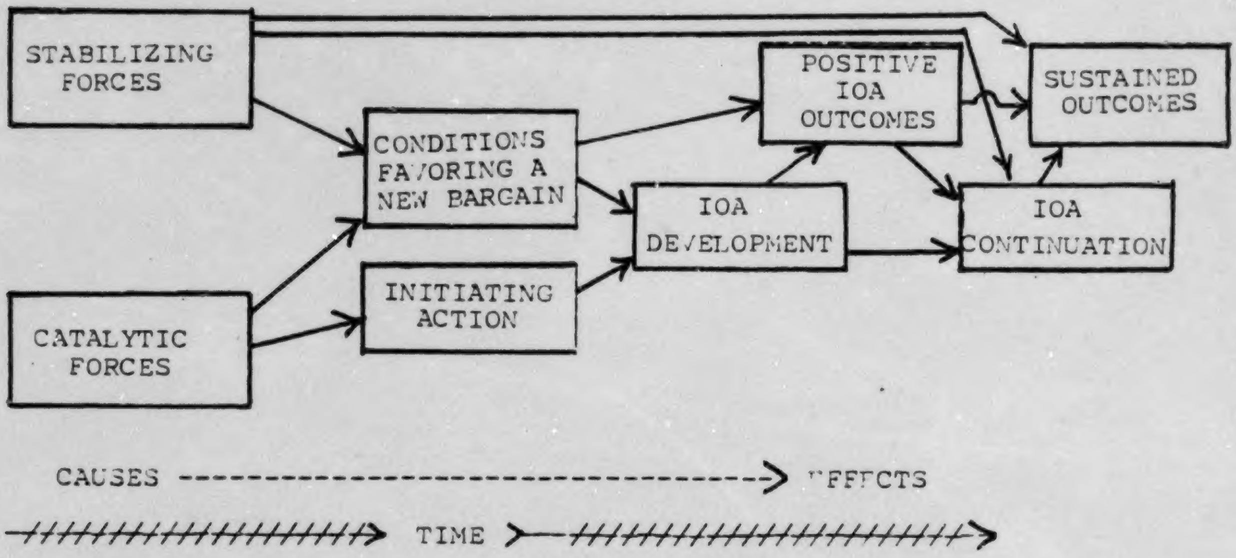
With the help of Table 9-2 we can begin to see what the range of outcomes is like: there are no failures among this set of cases. All were judged to produce substantial benefits, particularly for participating teachers and for those who became part of the IOA, itself. But among the sites there was also a wide variation in degree of success achieved with Arcadia clearly on top. Routinization seemed assured in the Eastern State sites, good at Arcadia, much more doubtful at Three Rivers and not likely for the Writing Consortium.

9.3 CAUSAL RELATIONSHIPS

We have stressed the importance of looking at these arrangements through time as sequences of events and activities which lead into each other in a continuing chain of cause and effect. To a large extent, past is predictive: what an arrangement was last year will be a good indicator of what it is this year; and what it is now will also be a good indicator of subsequent performance. Indeed, the more evidence there is for routinization, the more this will be the case. When we consider our three primary sites, we are looking at three very different stages in the life cycle of an IOA. Midwest is genuinely a new arrangement, entering its fourth year as our study concluded with much promise yet much doubt about the future. At the other extreme the eastern sites both have long histories as IOAs but the revival status of the Council at Eastern Private makes this site more like a new site than an old one. At Eastern State it is quite a different story. After a turbulent growth period in the late 1960s and some retrenchment and uncertainty in the early 1970s it has settled into a very stable mold. Because of this stability, in a way there is less to look at and less that is dramatic at this site. Our view is that there are two sets of forces at work. One set we could call "stabilizing forces" and the other "catalytic" or "initiating" forces. An enterprise can be sustained in a steady state for long periods of time with only the former in evidence but to start something new requires large amounts of the latter. To establish an arrangement which will stand the test of time requires both.

Figure 9-1 is a summary diagram which suggests how IOAs develop and become institutionalized, starting with these two sets of process elements. Stabilizing elements alone are sufficient to explain system survival and continuance but they cannot explain change, the development of new interorganizational connections, and new institutions. On the other hand, the catalysts can foment change, but the stabilizers are needed to focus and systematize energies into a coherent operation with staying power. The right set of conditions favoring a bargain include two sets of organizations (schools and universities in this case) who see in each other the opportunity to enhance their own functioning: each is deficient in a resource that could be provided by the other and each is enough discontented or disrupted to have the motivation to try something new, to risk a new encounter with another organizational entity which is essentially foreign, having different goals, structures, processes, inputs, and outputs. Even with these favorable conditions, however, IOA development does not proceed automatically. There must be some initiating action, typically by an energetic individual with an idea about how the bargain should be realized. Once the IOA has become an operational

Figure 9-1 A General Model of Cause-Effect Relations


STABILIZING FORCES
CONDITIONS FAVORING A NEW BARGAIN
POSITIVE IOA OUTCOMES
SUSTAINED OUTCOMES
IOA DEVELOPMENT
IOA CONTINUATION
INITIATING ACTION
CATALYTIC FORCES
CAUSES ----------------------------------> EFFECTS
TIME

reality there are two paramount issues: first, does it do any good? or what it is supposed to do? or what various people hoped it would do? and, second, will it continue? Positive outcomes depend on two factors. First is the level of activation of the IOA including the number of activities, the number of engaged participants in such activities, the level of intensity and continuity of that participation, and so forth. But positive outcomes depend on more than high levels of use. They also depend on the underlying validity of the original bargain and the continuing strength of the motivations on each side of that bargain. Continuation of the IOA (i.e. institutionalization) is contingent on three factors: the level of use achieved; the degree to which positive outcomes have resulted; and the extent to which stabilizing forces have taken hold of the enterprise.

We posit five stabilizing forces and five catalytic forces as follows:

S-1: Linkages: connections between people and organizations, communicative exchanges of any sort; the longer sustained, the greater the frequency of exchange, the higher the intensity of exchange, the more potent a factor linkage will be. A prior history of linkage is the single strongest predictor of IOA maintenance and productivity.

S-2: Homophily and Empathy: the degree to which the parties to an arrangement share key relevant characteristics and the extent to which they are able to identify with each other and to understand one anothers' circumstances and needs. Empathy grows out of homophily and vice versa. Both grow out of linkage. Homophily also makes linkages easier and more likely to happen. Thus S-1 and S-2, while conceptually distinct, are causally interconnected.

S-3: Congruence: the degree to which the parties to an arrangement have characteristics which are complementary and compatible. Congruence is largely a matter of perception and attitude and can change with increased or decreased linkages and homophily-empathy. In the case studies we often invoked the term "domain consensus" to describe the tacit or explicit agreement between the parties that they had separate and complementary roles and missions.

S-4: Mutual Resource Valuation: because IOAs are essentially relationships in which services are exchanged, they must be based on a mutual perception that exchange will produce something of value to the receiver at least in proportion to the time, energy, and other resources invested. Realization of these values emerges from linkages, homophily-empathy, and congruence. It can also lead to linkages.

S-5: Environmental calm: the extent to which the social and economic environment into which the arrangement is inserted remains stable and free of disruptions, displacements, unrest, and conflict.

C-1: Leadership: the extent to which one or a small number of individuals emerge to take charge of the enterpise and push it forward. Key leadership variables which emerge in our study are: energy, the extent to which the leader invests him or herself and persists in efforts over time; clout, the degree to which the leader commands respect of peers and superiors inside and outside their own organization and the degree to which this respect can be translated into resources and commitments; and ideology, the extent to which the leader is imbued with a clear and fervent idea of what he or she wants to do.

C-2: Ideology or new ideas: it is not clear from our study that ideas regarding educational improvement, networking, or teacher training and professional development act by themselves as stimulators or catalysts for IOAs; but it does appear that they act as important motivators and guides to leaders. They can become rallying points and provide reassurance to the lonely innovator. Both the Midwest statewide network and the Council revival were influenced by a strong teacher-centered ideology and by experiences and reports on other networking activities, but in both cases the primary inspiration for these imported ideas was the leader initiator.

C-3: Need: new efforts are driven in part by a perception that there is something wrong with the existing situation. In the case of Midwest there had actually been a statewide assessment of teacher training and a determination that substantial upgrading was needed, but a more powerful sense of need came from the leadership of the network both statewide and at Arcadia. Similarly, Loveland at the Council articulated the needs that the Council's program was directed toward. In the two county sites in Eastern State center coordinators sometimes undertook special projects out of their own sense of a need (e.g. on "bridging" between elementary and middle school) and then, with some promotional effort, were eventually able to persuade school authorities that there were such needs.

C-4: Resources: despite a persistent human tendency to image otherwise, there is no such thing as a free lunch. Any continuing effort requires resources, financial and human. New endeavors require new resources, additional to what was already there or reallocated from where they had been invested before. At both Midwest and Eastern Private, special new fiscal resources were made available and were important in inducing change. At Midwest it was a five year foundation grant; at Eastern Private it was reallocation of a research endowment coupled with a surge of membership fees. However, new resources don't just happen and once again the leadership seemed to be the key element in acquiring new resources.

C-5: Environmenal turbulence: change is likely to emerge from some sort of disturbance or shake-up. Most often it is a turnover of leadership but it may also be crises brought on by student or teacher militancy, declining enrollments, financial straights, wars, and recessions. The later 1960s was a period when many of these phenomena were occurring simultaneously and it was in that period that Eastern State's IOA got its start. It is noteworthy that Midwest got its start in a far less turbulent time. However, the leadership was strongly influenced by what had been going on in educational reform circles in the 1960s as was the new leadership at Eastern Private.

As we have introduced each of the above ten elements, we have suggested causal relations among them and a certain priority or hierarchy of importance. Figures 9-2 and 9-3 spell out these relations. Linkage is the outstanding variable: the IOAs we studied did not come out of the blue; they came out of pre-existing relationships which largely determined what happened. Linkages create a community of interest within which various types of arrangements for various purposes can be contemplated. When linkage leads to a full recognition of a community of interest and the existence of tradable resources, we have the basis for a bargain. However, bargains probably do not occur simply because of the opportunity. They occur because someone (the leadership or the key persons) assumes initiative, takes action, finds the special resources and personnel needed, and brings all the relevant parties together to make the agreements.

It is important to note that each of the ten variables listed above is subject to change over time, to growth or to decay.

Figure 9-2 How Linkage Effort Conditions the Bargaining Environment

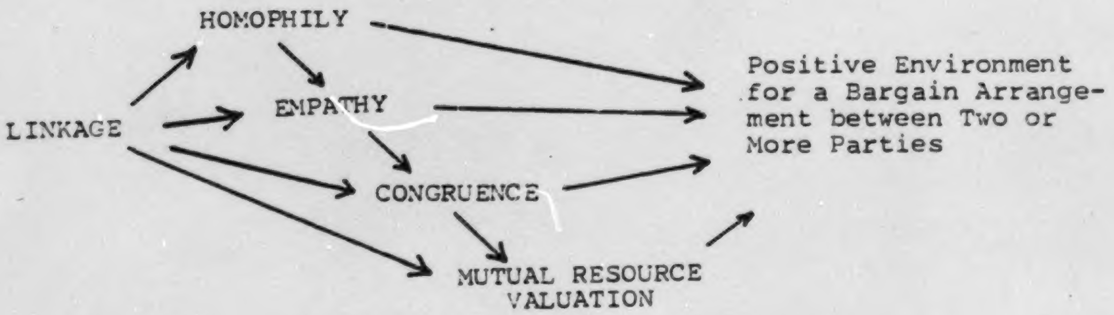
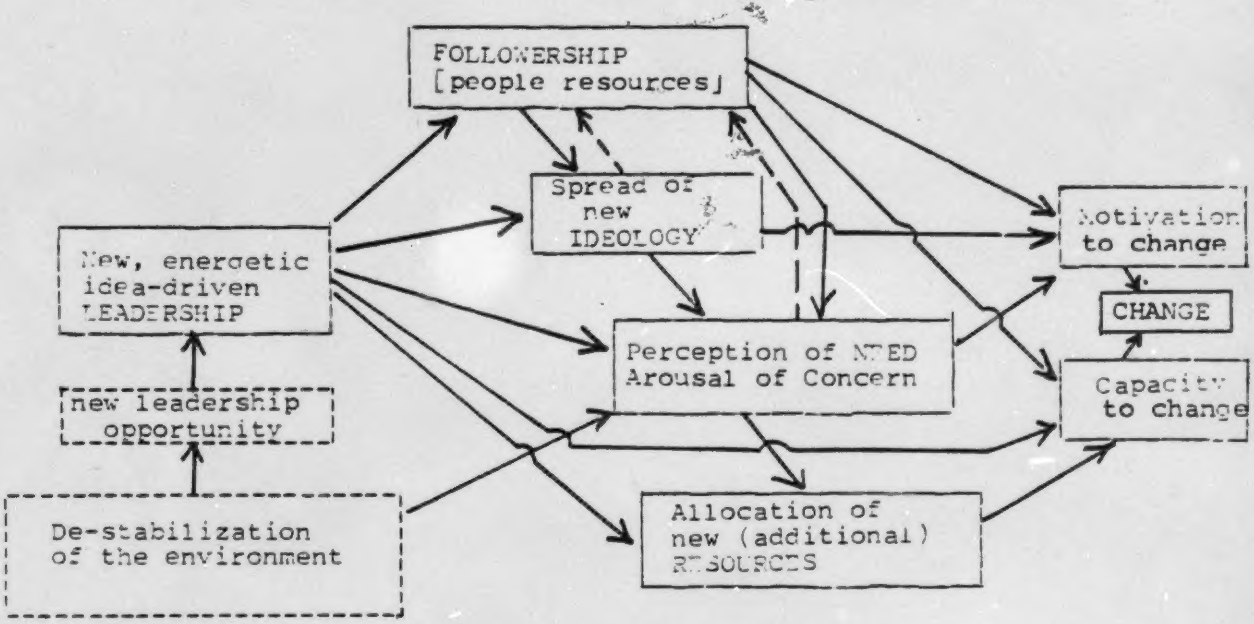

HOMOPHILY
EMPATHY
LINKAGE
CONGRUENCE
MUTUAL RESOURCE VALUATION
Positive Environment for a Bargain Arrangement between Two or More Parties

Figure 9-3: The Effects of Dynamic New Leadership on Change Action


FOLLOWERSHIP [people resources]
Spread of new IDEOLOGY
New, energetic idea-driven LEADERSHIP
new leadership opportunity
De-stabilization of the environment
Perception of NEED Arousal of Concern
Allocation of new (additional) RESOURCES
Motivation to change
CHANGE
Capacity to change

However, some among them are far more volatile than others and hence the distinction between stabilizing and catalytic. Linkages, once developed, stand in place or decay slowly. Homophily is a given and changes only when people change in fundamental ways which is not often and not quickly. Empathy, once established, can also fade as people go their separate ways, but it generally does not disappear. Congruence, representing the acceptance of others as part of one's own system or parts of a larger system of which both parties are integral members, is unlikely to change, once established, unless the entire system changes or each of the parties changes in a major way, e.g. through expansion or contraction. Mutual resource valuation is akin to congruence. If the parties don't change, it is unlikely to change, or it will change only gradually. Eastern State and its IOA network were affected gradually in the 1970s by enrollment declines and the resulting decline in the demand for new teachers and student teachers. The IOAs responded by gradually increasing their offerings and emphasis on in-service, thus continuing a high mutual resource valuation at the majority of sites. Finally, environmental calm is more an inherent characteristic of certain communities than an aspect which goes up and down. Arcadia had more of it than Three Rivers. Cardon had more of it than Hanburg. Both Eastern State and Eastern Private Universities had trouble building IOA relations with large, turbulent urban districts

The contrast with the catalytic factors is striking. Leadership can, of course, be stable over a number of years, but leaders retire, go on leave, and take other jobs, and the more dynamic and innovative the leader the more he or she will be in demand elsewhere. Ideas are perhaps even more volatile; they tend to come in waves or fads; they often flare up with the publication of a particular book or the publicizing of a (usually exaggerated) success story. Needs also can fluctuate considerably, especially since the perception of need is so sensitive to leader manipulation and to idea fashions. Resources can be stabilized, of course, but the surplus resources needed for the establishment of new enterprises tend to be temporary and to fluctuate wildly over time. Developing a firm and lasting financial base is probably the most difficult task of routinization of a new arrangement, an achievement which has so far eluded the state-wide network at Midwest and the majority of its centers as it has the revived Council at Eastern Private. Finally, it goes without saying that environmental turbulence disrupts all enterprises for good or ill. It creates situations in which innovations can get started rapidly but it also makes it harder for them to survive very long.

When we begin to piece together the life histories of these IOAs using this simplified 10 factor schema, the interplay of stabilizing and catalytic forces becomes apparent. Here are brief recaps of the cases using the schema.

9.3.1 The Council Revival at Eastern Private

In 1976 The Council was nearly moribund but hanging on because of a long tradition of linkage, especially among school administrators in the area. Homophily with the university was weak. There were no problems with congruence but little sense of shared system, and mutual valuation had decayed markedly since the Founder's death 15 years earlier. The new leader , Loveland, had a strong sense of mission and was widely respected in the university. In addition her experience and orientation gave her high empathy with both teachers and administrators, an empathy which she conveyed forcefully and convincingly, bringing her advisory board and her student followers to rally around her with enthusiasm. She very early worked to put together a new program-service array that would appeal to administrators and teachers, thus increasing the university's resource valuation in the eyes of the districts. She also corralled fiscal resources from the university to match new membership fees. She took advantage of the somewhat turbulent environment of most of the districts by suggesting and offering program themes which fed into them (e.g. teacher burn-out, sex equity, laws and legislation). She did not, however, develop a system of credits to institutionalize the valuation of offerings and she could not bring either the college or the districts to a point of recognition of mutual interdependence. Programs were valued by districts but had to compete with a large variety of other resource providers who sometimes had quality offerings which were cheaper and/or were accompanied by the granting of professional credits. Additionally, resource valuation was not mutual; there was little return to the university or the faculty members who participated. The result was an overdependence on Loveland's charismatic leadership and shudders from staff and advisory superintendents when she took long leaves. There was a trend in the third and fourth years of the rivival toward the establishment of sub-networks around special interest topics among a smaller number of actors. The advantage of such a process was to intensify selected linkages and increase homophily and congruence because of the topic focus and the presumably highlighted need. They also reduced dependence on Loveland's leadership. Nevertheless, such sub-networks shared the twin failings of inadequate professional pay-offs for participants and heavy competition from other sources than the university. As illustrated in Table 9-1 with the ratings of the Writing Consortium, institutionalization of these sub-networks is highly problematic.

9.3.2. Eastern State

As the prime teacher training institution in the state, the university had a long tradition of multiple linkages as a supplier of talent, and various schools had long been providing the placements for student teachers. The IOA emerged in the 1960s as a means of formalizing and coordinating hundreds of individual ad hoc arrangements. Inter-institutional congruence was clear and strong as was mutual valuation as the university was able to provide not only credits for coursework and supervision but also status-enhancing adjunct titles to school personnel. Troubles began internally with the encroachment by the college administration and IOA staff on territorial prerogatives of the faculty. Persisting lack of domain consensus within the college led to the undermining of a very dynamic and growth-oriented IOA leader in the late 1960s and to the gradual evolution of the current strong but "low key" leadership of Goldman. Because of good linkages,

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high empathy through those linkages and the mediating coordinators at the centers, the IOA was able to sense need changes and shift its array of offerings toward in-service as enrollments declined throughout the state.

9.3.3 Midwest

The Arcadia environment was loaded with stabilizing factors as noted earlier, but these would never have led to an innovative and successful IOA without the strong, artful, and dynamic leadership of Lessing. Lessing had been strongly inspired by his participation in North Central University's experimental graduate training program and was an enthusiastic member of the network across the state that remained as a residual for years afterward. Thus he had both ideas and linkages which were cosmopolite and innovative. But the key to success was his strong localite orientation and empathy with teachers which guided him to keep the rhetoric of radical reform in abeyance. New services and offerings were introduced gradually, voluntaristicly, and each added to the valuation of the center. The center also opened many new links to teachers, to faculty, to each other, and to a world of educational materials and practices.

The Three Rivers story represents an interesting and sharp contrast to Arcadia. Even though the community is an environment which is shared by the university and the schools, the relationship is weak and strained. Again the Experimental Program was a crucial source of inspiration and motivated person power, but that program had left scars in the district, perceptions of radicalism and meddling in school affairs by young outsiders who did not understand the ways of Midwest State. The leadership for the fledgling center came from Saganne by delegation to his proteges who had no real legitimacy in the district and no clout of their own. What they did have was very strong motivation and a strongly-held teacher-centered ideology. Starting from an orphaned status in remote and inadequate facilities, by the third year a second generation of leadership was able to bring the teachers onto their side and generate a high level of use. Nevertheless, future continuance looked very doubtful because of the paucity of stabilizing forces, e.g. lack of centrality and weak linkages.

9.4 THE IMPORTANCE OF LEADERSHIP

While the finding may at first consideration appear to be mundane, we found leadership to be a vital ingredient of successful IOAs. Either creation or revitalization of an IOA is inevitably associated with the appearance of a new leader and if the arrangement is multi-tiered as in the case of the two state arrangements such leadership must emerge at each level for the full range of successful outcomes to appear at that level. The Council was really invented by its leader; it reflected his personal ideas regarding educational change and his tremendous influence on practitioners and students in educational administration, nationwide. His ideas and his influence brought memberships and hence resources to the Council and brought a continuing pool of highly motivated and able graduate students who were the mainstay of IOA operations. Saganne at Midwest played an analagous if somewhat less potent role. He,too,was the inventor, and while the IOA was in many ways an outgrowth of the previous Experimental Program, neither that program nor the new initiative were likely to have turned out as they did without his influence. Saganne was able to inspire a large cadre of followers through his ideas and these followers, after graduating from his program, developed the informal statewide network that Saganne was able to formalize in the statewide IOA. His personal efforts were also largely responsible for the acquisition of resources from the private foundation and from the state. The two local-level case studies in Midwestern State also illustrate the predominant role of leadership variables. The impressively and multiply successful IOA at Arcadia reflected the very special talents of Lessing from the outset. Lessing derived considerable inspiration from Saganne's teaching and the Experimental Program, but in coming to Arcadia, he had the wisdom to attend to local norms and local teacher concerns, infusing his ideology in a series of actions which built on one another while avoiding any displays of advocacy. Lessing also built strong connections within the local college, teaming with fellow Experimental Program graduate Goff who had more seniority, clout, and "insideness" at the college. In contrast effective leadership did not emerge at the Three Rivers site until the third year. At first there was no inside leadership whatever and the non-legitimitized appointees from the university blundered in with a strong teacher-centered self-help ideology and energy but no clout and weak internal linkage. Only after some painful experiences and the burn-out of two appointed leaders did someone come in with the realization and the capability of building internal linkages and building on self-perceived teacher needs.

Leadership variables are somewhat harder to uncover at the Eastern State site but are still very much in evidence. The most dynamic phase in the development of the IOA occurred in the late 1960's; a period which was characterized by many respondents as "the Carter era". While the origins of this IOA predate Carter by some years it was clearly Carter who breathed life into it, expanding operations dramatic establishing the teacher center concept as an operational reality in several county school districts. Carter inspired followers with his energy and consistent vision of the teacher center and was also able to attract major financial resources in the form of federal grants. His undoing was inadequate linkage within the university and his inability to bring conflict with established faculty in secondary education to successful resolution. The contrast of Carter and the current IOA leader Goldman is striking and instructive. They shared the same vision and Goldman grew up professionally in the Carter era but much experience as a junior staff person, student, and observer taught Goldman the importance of keeping a low profile, working with the faculty and carefully observing their concerns and prerogatives. Goldman had the advantage that he did not have to create a new entity but only to manage and improve what was already a reasonably successful enterprise. Nevertheless, his leadership appears to be a key factor in the maintenance of the network and strengthened ties among center coordinators state-wide during times of resource stringency.

Finally, we observe in Alice Loveland the primary basis for the revival of the Council. Most respondents associate the revival very clearly and strongly with her presence. Her acceptance of the appointment was seen by administrative personnel at the university as the most important condition for continuing the Council. She had a very wide and potent personal network that extended to a large following of students many senior faculty, and many influential educators across the country. She had an intense if somewhat eclectic ideology which combined dedication to teacher concerns with networking and planned change and this inspired great trust and enthusiasm in the mid-career mostly female students who she recruited as the main-stay staff of the revived Council.

All these observations compel us to name "leadership" as a key factor, but is "leadership" a variable? Clearly it is the embodiment of many of the ingredients which are necessary for IOA establishment and growth. Leadership and linkage as variables are related in a number of ways. A leader, first of all, can be characterized as a connecting point in a network, the hub of a wheel and/or the bridging element among many other otherwise unconnected elements. Most of our leaders are very strong both as hubs within their own systems and as bridges or linkers between systems, especially between the university world and the world of practice in elementary and secondary education.

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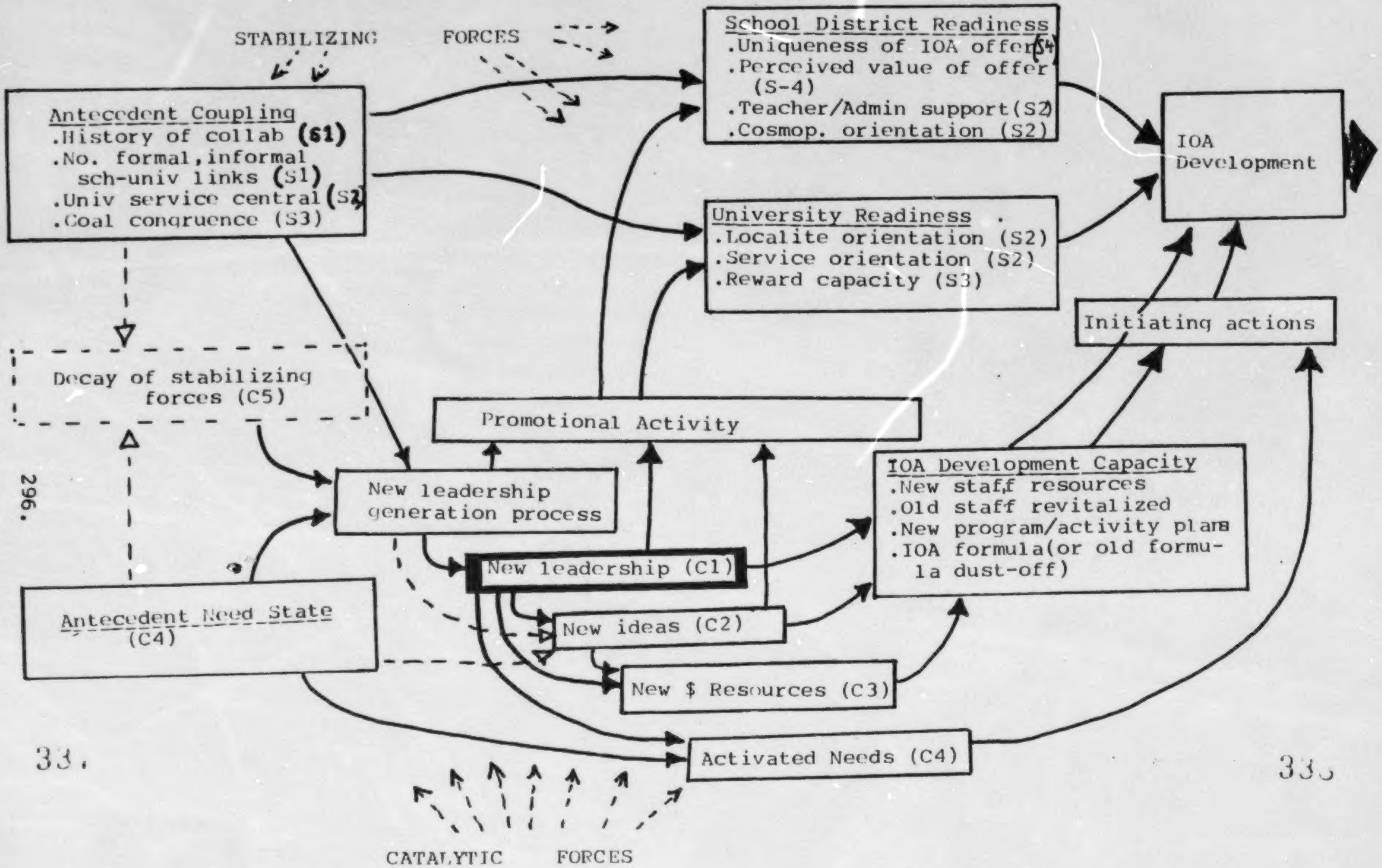
9.5 MODELING THE CAUSES OF IOA DEVELOPMENT

Figure 9-4 summarizes our understanding of how a new IOA effort is launched and is derived both from the general causal model in Part Eight (Figure 8-1) and essential points in the individual case modeling efforts. Generally, the upper part of this figure represents the "stabilizing forces" listed and the lower half the "catalytic forces". For each of the IOAs studied we found considerable evidence for "antecedent coupling", i.e. a history of formal and informal connections between the college or university and many of the schools and school districts which subsequently became members of the arrangement. This was typically a result of the training of school district personnel at all levels: teachers, administrators, and other school district staff would have received some or all of their training at the college. Additionally college faculty would have engaged in extensive formal and informal consultation and in-service training and there would be a standing expectation (goal congruence) that the role of the college or university was to serve as a system of support and professional advancement for the schools.

These antecedent conditions explain why an IOA is likely to succeed once it is established but they do not explain how one comes into existence in the first place. There must be a spark, a catalytic force of some kind, a disturbance in the status quo which starts change on its way. In at least one site (Eastern Private) part of the stimulus was the decay of the existing arrangement and the threat that it would cease to exist altogether. In the other sites the decline of enrollments also played a destabilizing role. The variable "antecedent need state" represents the general level of tension or dissatisfaction with the status quo which is felt to a degree by almost everyone but which is rarely, by itself,

Figure 9-4: A General Model of Variable Interactions in IOA Development


STABILIZING FORCES
Antecedent Coupling
.History of collab (S1)
.No. formal, informal sch-univ links (S1)
.Univ service central (S2)
.Goal congruence (S3)
School District Readiness
.Uniqueness of IOA offer (S4)
.Perceived value of offer (S-4)
.Teacher/Admin support (S2)
.Cosmop. orientation (S2)
University Readiness
.Localite orientation (S2)
.Service orientation (S2)
.Reward capacity (S3)
IOA Development
Initiating actions
Decay of stabilizing forces (C5)
Promotional Activity
New leadership generation process
IOA Development Capacity
.New staff resources
.Old staff revitalized
.New program/activity plans
.IOA formula (or old formula dust-off)
New leadership (C1)
Antecedent Need State (C4)
New ideas (C2)
New $ Resources (C3)
Activated Needs (C4)
CATALYTIC FORCES

a sufficient stimulus for special action. Probably the most critical result of this early destabilization and need arousal is the search for or the emergence of new leadership, a person or persons capable of taking advantage of the situation, of promising a new form of stabilization in the future which will deal with the aroused needs and concerns in some way. Once a leader is on the scene (C-1) then a number of things begin to happen which are significantly shaped by the energy, talents, personality, connections, and ideas of this leader. Typically the leader will be driven by a conception of what the change should be (C-2), an ideology which may or may not be coherently developed and expounded and which may or may not be widely shared at the outset. The new leader also attracts new financial resources (C-3) through the confidence he inspires and through the potency of the images of potential which he can create. The leader's promotional zeal also serves to call attention to the need situation and to increase general concern for action regarding it (C-4).

The leader's promotional efforts are directed toward both the university setting and the school districts, creating an atmosphere of readiness on both sides. At the same time, an operational capacity for the IOA is being developed through the enlistment of a cadre of followers ("new staff resources") who will loyally and enthusiastically try to implement the new ideas. New leadership, new ideas, new or newly energized staff,and new fiscal resources collectively represent an "IOA development capacity". When the capacity is mobilized and directed (by the leader) into initiating actions, the IOA is on the road to development.

Nevertheless, development will not happen or will proceed in an unsatisfactory way if a significant number of stabilizing forces are not also brought to bear. These we summarize as "school district readiness" and "university readiness". On the school side an important aspect of readiness is the perception that the offerings of the new arrangement are relatively unique, not readily available elsewhere and not easily generated internally. In part, however, this perception will be a residue of past experiences of collaboration and linkage with the university:the more there have been and the more satisfactory the experience, the more the districts will be likely to perceive the resources as unique.

In general readiness factors on both sides which are of paramount importance relate to the twin concepts of homophily and empathy. To what extent does each party to the exchange see itself as similar to the other, understanding of the other, and appreciative of the needs and concerns of the other.

9.6 MODELING THE CAUSES OF IOA OUTCOMES

Figure 9-5 picks up where Figure 9-4 leaves off, with the initial development of the IOA defined in terms of activities and reward values to schools and universities. Activation of the IOA is really a function of such development and the level of participation by each side; the latter in turn is partly a function of the "readiness" factors. Participation and utilization inevitably lead to first level outcomes in the form of experienced rewards by both sides and increased and strengthened school-university ties. These, in turn, should lead to agreements on both sides to continue the arrangement at least into a second school year, but the extension of such agreements will also depend on the continuing sense that there is a real need being served.

Even with the experience of reasonably positive outcomes, however, long term strength of an IOA will be affected by the presence of other organizations, activities, and resource facilities in the school district environment. The Arcadia center succeeds in part because it is the only game in town, albeit a very good game. The latter day Council struggles because there are so many competing resource systems in the environments of its member school districts: other universities, some very strong with creative outreach programs; state and regionally supported service agencies; and often internal staff capabilities for curriculum development and instructional improvement of the highest order.

To reduce the complexity of the figure we have omitted representation of a corresponding set of distractions on the university side. Major universities and their colleges of education may see themselves as serving many different types of clients with very different needs and concerns. Some, such as Eastern Private and to an extent North Central and Eastern State, see themselves as serving a national and international constituency, not a local or regional one. If such a self image is strong

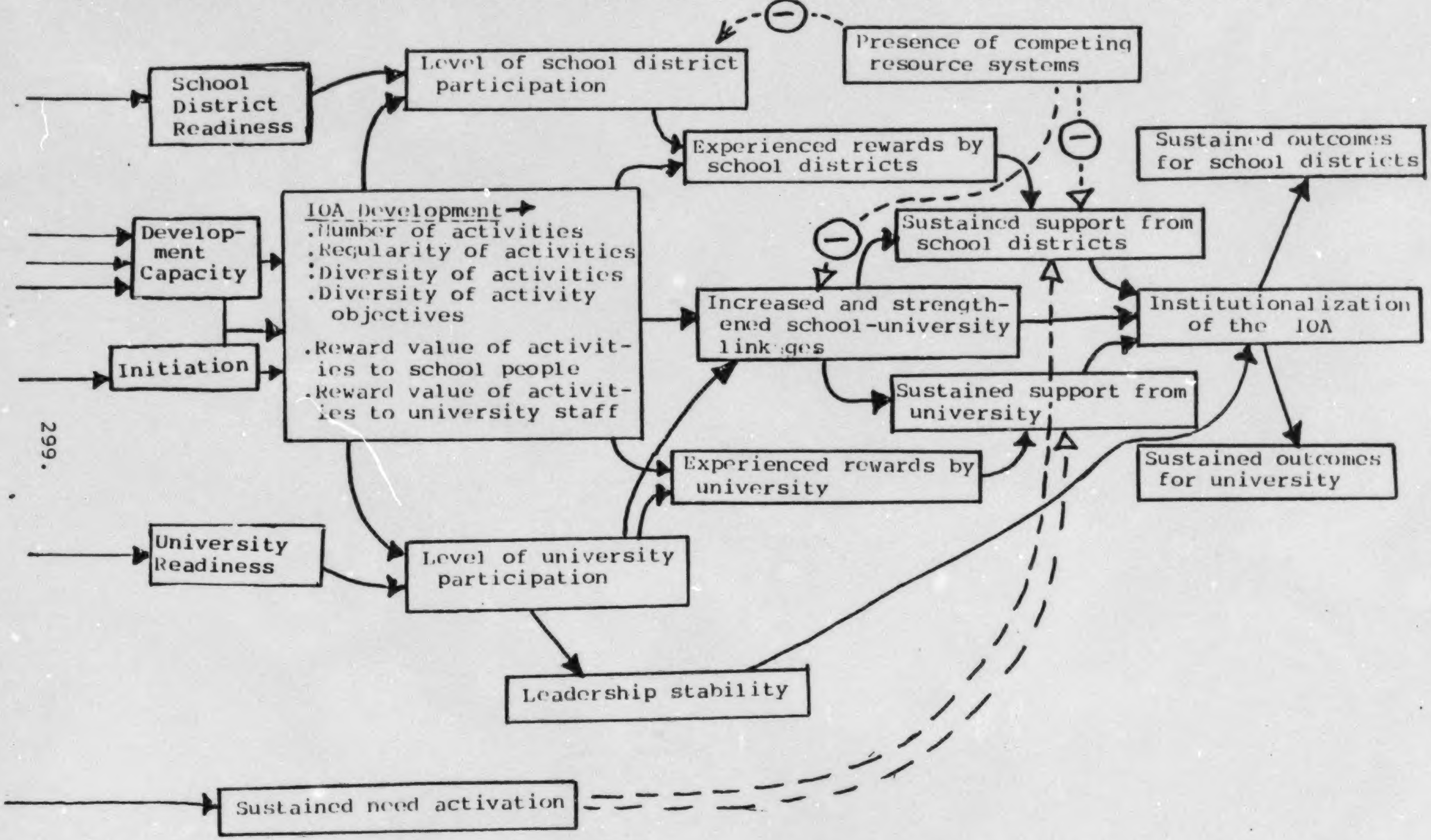


Figure 9-5: A General Model of Variable Interactions Leading from IOA Initiation to Long Term Outcomes

School District Readiness
Level of school district participation
Presence of competing resource systems
Experienced rewards by school districts
Sustained outcomes for school districts
Develop-ment Capacity
Initiation
IOA Development
.Number of activities
.Regularity of activities
.Diversity of activities
.Diversity of activity objectives
.Reward value of activities to school people
.Reward value of activities to university staff
Sustained support from school districts
Increased and strengthened school-university linkages
Institutionalization of the IOA
Sustained support from university
Experienced rewards by university
Sustained outcomes for university
University Readiness
Level of university participation
Leadership stability
Sustained need activation
−
−
−

it will lead to very diverse faculty involvements and will reduce the likelihood of concentrated college-wide support for IOAs.

Finally, institutionalization of the IOA, i.e. its long term maintenance and acceptance as an operational entity, builds on four elements: (1) sustained support from the district which is manifested in attitudes, behavior, and dollars; (2) a like kind of support from the university; (3) a continuing and varied program of IOA activities in which university and school personnel are mutually engaged; and (4) a continuity of strong leadership, preferably demonstrated through the smooth transition from the initiating leader to successors who have a talent for dealing with system maintenance issues as well as the energy and clout necessary to shore up faltering university or school support. This level of institutionalization appeared to be exhibited at at least one of the subsites we examined, the teacher center configuration in the Hanburg County School District affiliated with the Office of Field Experiences of Eastern State University. The arrangement had been in place for several years, had survived more than one leadership transition both at the county and university levels. At the same time it had expanded as a program from one center to three with an ever-widening set of offerings. In some ways what was happening at the Arcadia site was more impressive, more obviously impactful on teachers and especially on the college, but the jury is still out on the much newer Arcadia arrangement as far as long-term continuance is concerned. What will happen if the dynamic initiator disappears from the scene for whatever reason or turns his attention to new concerns? Our evidence suggests that there is more than enough going for this particular arrangement to guarantee survival but whether the same dynamism and the same high quality of outcome can be sustained over the years is probably more doubtful.

PART TEN: IMPLICATIONS

There are many implications which can be derived from this study. Probably the most important one is that university-connected school networks can work very well and serve a number of purposes related to the improvement of educational practice. This is an umbrella conclusion under which there are many more specific implications of relevance to different readers. This final chapter will be divided into nine sections corresponding to what we feel are the most salient interests. First we will propose some general implications which apply, regardless of the specific reader orientation. Then we will consider three levels of what we would call "policy makers", i.e. agencies or government authorities who have a general interest in the improvement of educational practice and a responsibility for planning, designing, and authorizing such activities. The three levels we consider are: (1) funding agencies in general including foundations, (2) the federal government, and (3) state education agencies. We will then consider implications for universities and school districts and for persons in such organizations who might be interested in getting into this kind of work. Finally we will consider the kinds of R&D that seem to be needed to advance the state-of-the-art regarding university-school collaboratives.

10.1 GENERAL IMPLICATIONS

10.1.1 It Can Be Done

As noted above, the most important implication of this study is the fact that it illustrates the possibility of setting up and maintaining collaborative arrangements between a university and a group of school districts which generally serve the purpose of practice improvement in schools. The study also suggests that there are many alternative paths to this end which seem to be workable, e.g. bi-lateral arrangements, multi-lateral arrangements; arrangements involving centers on campus, centers in the district, and no centers at all; arrangements which involve a high degree of formalization and ones which involve minimal formalization; arrangements in which both the district and the university share responsibility and arrangements where both initiative and responsibility reside heavily on one side or the other.

10.1.2 Wide and Substantial Benefits Can Be Derived from Successful IOAs, Especially for Participating School District Personnel

The most obvious benefits to be derived from these IOAs go to teachers in the form of training and exposure to a great variety of new ideas and instructional approaches. However, when mutual involvement is intense and sustained,we can also expect a variety of more substantial and system-wide benefits such as improved problem-solving capacity and access to diverse and sophisticated external resources. Benefits to universities which choose to participate in IOAs are less substantial but still significant. These include increased understanding by faculty of the operational reality of schooling, improved practice teaching arrangements, and improved placements for graduates.

10.1.3 The Costs Are Modest

IOAs seem to be a mechanism for channeling energies and enthusiasm into productive avenues without large financial incentives. In proportion to the numbers served and the quality of services provided,the costs of each of these IOAs with their respective programs appeared to be very reasonable. Each of those studied appeared to require no more than the equivalent of two full time professional staff with minor logistical support to serve a rather complex catchment area including dozens of elementary and high schools. The diversity of configurations makes generalization difficult, but in no case were we looking at high salaried positions and in all cases we noted the successful dependence on large quantities of volunteered effort.

10.1.4 A Bargain Must Be Struck between the University and the Schools such that All Parties Feel They Are Going to Benefit

Either explicitly or implicitly each party to the IOA has to feel they are getting something substantial out of the experience. When the reward value of participation is not clear or declines for one side or the other, the arrangement is destabilized and will begin to decay unless steps are taken to change the basis of the bargain. It is partly for this reason that it is desirable for IOAs to serve a multitude of objectives, and each of those studied did so. Since complex arrangement involving many individuals with different roles and interests, the likelihood of matching needs and resources is much greater if the range of objectives accepted and served is broad.

10.1.5 Initiation of an IOA Requires Dynamic and Inspired Leadership

The leadership factor loomed very large in each of our cases, especially at the point in history where the IOA is being formed. At that time it appears to be essential that a leader emerge who is driven by a strong conception of what the IOA should be, who has enormous reserves of energy in implementing that conception, who has the capacity to inspire others with his or her vision, and has the kind of respect and credibility with both school and university personnel to command some significant resources from each. There are variants on this theme, however. We found at one site (Arcadia) that the ideology could be shared by two people and that one (Goff) could provide the clout while the other (Lessing) provided the zeal and the operational know-how to follow through. We also found that where the basic pattern of the IOA had become routinized a new arrangement at a specific site could be established without the emergence of an inspirational leader (Cardon County site in Eastern State).

10.1.6 Initiation of an IOA Requires an Idea of What the IOA Should Be

Corollary to the above, an IOA needs to cohere around a workable concept of what it should be. This need not be a very elaborate or clearly worked out theory or plan, and typically it is not. On the other hand, two of the three IOAs studied were inspired by in part by theory and research on networks and on the process of planned change in education. These same two (Midwest State and Eastern Private) were also strongly influenced by teacher-centered and experience-based theories of instructional improvement. It is suspected that similar influences affected the early development of the Eastern State IOA in the 1960's but this period was not accessible to study.

10.1.7 IOAs Must Build on a History of Successful School-University Linkage in the Past.

In each case we found that the current IOA was preceded by a long period in which various individuals on the university side had various contacts on the school side. Many of these were informal but in some cases there were major training projects or IOAs of a somewhat different kind. This implication leaves us with a very significant dilemma: can IOAs of the type we have been studying be created de novo? or will they inevitably represent reformulations or coagulations of interests and relations which have been there all along?

10.1.8 A High Degree of Planning or Pre-structuring Does Not Appear to Be a Necessary Prerequisite to IOA Formation and May Even Sometimes Be Contraindicated.

It is important that IOAs have considerable flexibility to adjust their programs to operational realities in the school and the university environments. This makes detailed planning difficult and probably undesirable. Planning of activities was very informal at two sites (Midwest and Eastern Private) and decision making on program was almost entirely decentralized at two sites (Midwest and Eastern State). Thus coordinators at each sub-site (teacher center) were largely on their own in determining the kinds of programs to be offered and the way in which center activities would be structured and developed.

10.1.9 More Complex and Systemic Outcomes Must Build on a Base of More Simple and More Individual Outcomes

It is possible to achieve major system-wide changes through IOAs, but such goals probably need to be seen as the end product of a staging process in which individual goals are achieved first and the resulting relationships used as a foundation for considering problems of a more serious or complex nature. At the Eastern Private site we saw several instances where IOA-sponsored change agents attempted to involve groups of teachers and whole schools in collective problem-solving efforts before strong relationships had been established, particularly with administrative levels. Most of these efforts failed or were redirected after considerable frustration into more modest and individualized assistance efforts. At Arcadia, in contrast, early individual projects led to increased and more wide-spread realization by teachers of the potential of the center. Thus later projects could be undertaken which were considerably more complex and ambitious, involving larger numbers of teachers and more aspects of the curriculum and the instructional process.

10.1.10 School Collaboratives Which Include a University Offer Unique Advantages over Those Which Do Not

It is important to note that each of the universities and colleges in our set of cases was the initiator of the IOA. Each also represented a trusted source of knowledge and expertise to which the arrangement gave varied access. Each also represented a different kind of resource than any that could be created internally or acquired through bureaucratic channels, and yet one which had some stability, an institution that would continue to operate even when special projects and special grants were gone. On the down side, universities generally are institutions without a great deal of similarity to school districts and not much empathy. Their central concerns lie elsewhere, and the larger they are and the more distinguished their reputation the more this is likely to be the case. The cosmopolite orientation of the university is both its curse and its blessing to the schools. They value the cosmopoliteness because it brings them into contact to a much broader and richer external resource universe, but this same orientation draws them away from the essentially localite relationship which is the IOA.

10.2 IMPLICATIONS FOR FUNDING AGENCIES IN GENERAL

One of the special attractions of this project was the fact that each of these projects was developed and seemed to subsist without the intrusion of federal dollars. However,there is no such thing as a free lunch, and IOAs require some level of financial support. We derive at least four implications from our study.

10.2.1 More May Mean Better up to a Point

The strongest IOA from many angles was the original Council at Eastern Private in its heyday, an enterprise which drew on a tremendous amount of volunteer assistance from the districts and partially paid professional help from a small army of graduate assistant "Fellows", but the old Council also provided substantial revenues to the university through memberships and later through various grants and contracts, some from the federal government.

Likewise the extensive field work of the Eastern State IOA could not be carried on without full time fully supported coordinators both for the teacher centers and for the Office of Field Experiences at the university. By the same token it appeared that efforts in the revived Council at Eastern Private were limited in part by the very small dues structure and the very heavy reliance on voluntarism on all sides. There also is an argument that the more one invests in an effort the more one cares about the outcome. In any case it appears that there is some positive correlation between investment and results.

10.2.2 Long Term Support Issues Must Be Addressed

There also seems to be no magic formula for continuing IOA projects over a period of years without support. If there is external start-up support from a third party source (e.g. an endowment fund at Eastern Private, a large federal grant in the late 1960's at Eastern State, and a rather large five year foundation grant at Midwest), some way must be found to substitute other resources("hard money") by the time such support terminates. The great success of the Eastern State sites lies in the fact that such support has been well provided for through standard contractual agreements.

10.2.3 Organizations Will Be Reluctant to Commit Hard Resources if They Perceive Themselves Primarily as Providers

Universities involved in IOAs generally perceive themselves as the service providers even though they also derive benefits. The question then arises: is this a central university function, one on which limited hard money resources should be commited year after year? It is a nagging question at Eastern Private. At Midwest the solution may come from a continuing grant from the state to replace the foundation monies after the fifth year. At Eastern State support for OFE activities is an accepted part of the state's budget for the university.

10.2.4 In Lieu of Long Term Support Arrangements IOAs May Depend Too Heavily on Leadership Charisma

The crucial factor in the start-up phase of an IOA is not money but leadership which generates enthusiasm and the investment of volunteer energy by followers. It seems very risky from a policy standpoint to rely on such leadership as a continuing phenomenon.

10.3 FEDERAL POLICY

Even though these three IOAs were selected in part because they did not depend on federal funding, when we search their history we do find such federal involvement at one time or another. At Midwest the very influential "Experimental Program" at North Central University which established the ideology and the informal network on which the IOA was built was a federally funded project of three years duration. At Eastern Private the Council was a magnet for federal research and training funds in the late 1960's and early 1970's, a fact which may have undermined self-sufficiency when such resources disappeared in the mid 1970's. At Eastern State the dynamic expansion period of the 1960's was partly a function of a large federal teacher centers grant. Even today Midwest's leader, Saganne, continues to submit proposals for federal support and Loveland's Council at Eastern Private was partly sustained into its fourth year by a federal grant. All this suggests that there has been a significant federal presence in IOA development and maintenance, nationwide. What are the implications?

10.3.1 Federally Supported Demonstration Projects Can Play a Role in Initiating Similar IOAs

There is no particular reason why federal funds cannot and should not be used as start-up resources in those places where the potential for a strong IOA already exists, just as third party resources were used at Midwest through the foundation grant and at Eastern Private through the endowment fund. With the shift of Title IVc administration to the states it may be more appropriate to seek such assistance through state education agencies, however.

10.3.2 Documentation Research on IOAs and Its Dissemination Are Obvious Federal Responsibilities

If this study of three university-school collaboratives suggests that the model has real promise as a means of school practice improvement nation-wide, it would then seem appropriate that the federal government through the NIE undertake a more systematic search, documentation, and evaluation of such efforts with the eventual aim of making the most successful models available at places and in states where they could profitable be followed. The mechanism for diffusion could possibly be the

National Diffusion Network. For example, a very successful IOA such as we discovered at Arcadia could well be a candidate as a "Developer-Demonstrator" within the NDN framework.

10.3.3 University-School Collaboratives Could Be Natural Facilitators of R&D Diffusion and Effective Practice Diffusion within States and Inter-state Regions

Established IOAs of the type we have been studying could be used as conduits for validated practice and R&D knowledge such as is generated by NIE and other federal agencies and such as is disseminated through the NDN. The NDN relies on "State Facilitator" projects, usually located in state agencies, but IOAs could also play this role either as an alternative or a supplement to the SF's. We have seen that as presently implemented the knowledge transferred through these IOAs is wide-ranging but not necessarily validated or based on systematic R&D. On the other hand, there appears to be no substantial reason why these IOAs could not be encouraged to connect to such sources as the NDN.

10.4 STATE POLICY

10.4.1 The State Is the Logical Locus of Support for Long Term Maintenance of University-School Collaboratives.

The Eastern State case provides a model for state support of successful IOA operations, long term. Outreach efforts of this type in agriculture have long been assumed as a responsibility by every state through the Cooperative Extension Service. Even though the Eastern State investment is minor by comparison, it does represent an extension of the agricultural model which is both appropriate and successful. At the time of case study write-up Dean Saganne was also lobbying with his state for special "line item" support for the Midwest state-wide network.

10.4.2 Support for University-Inspired Efforts Is Probably Less Costly than Establishment of a Free Standing State Network of teacher Centers or School Support Centers

Several states already have their own service arrangements for school districts which parallel and duplicate the kinds of activities that most of these IOAs perform. Nevertheless, the unique capabilities of universities should be acknowledged and where a university-based collaborative arrangement either exists or has strong potential of development the state should consider utilization of such an IOA as an alternative to the free standing service center arrangements such as those that presently exist in states like New Jersey, New York, and Colorado.

10.4.3 Use IOAs to Extend Capacities of Existing Intermediate Service Centers

For those states such as the above-mentioned where service center networks already exist consideration should be given to identifying university-centered collaboratives and establishing formal links with them to extend service capacities and the shared resource pool.

10.5 IMPLICATIONS FOR UNIVERSITIES

These studies should be of special interest both to those universities which already engage in similar outreach activities and those which don't but might consider doing so.

10.5.1 Just Warm Bodies Won't Do for Leadership

Careful thought should attend the selection of leadership. Leaders require both enthusiastic energy and clout with colleagues and students. Leadership should also be seen as a tenured faculty role and should be supported by a minimum of half time relief from standard college teaching duties. The exception to this rule is the situations, such as in the Arcadia case, where standard teaching obligations are reconfigured and integrated with IOA activity.

10.5.2 Consider the Range of Possible Benefits to the University and Design Specifically for Them

An IOA can be more than merely a service by the university to its neighboring schools. If it is so conceived,the "bargain" will always be out of balance and requests for continuing support a source of tension. However, both the original Council at Eastern Private and the Arcadia teacher center illustrate that the IOA can be an important source of stimulation and rejuvination to the university as well as to the schools. Recognition and credit should thus be given for faculty participation. Additionally, wide-spread faculty involvement in decision-making and in implementation of IOA activities is desirable.

10.5.3 The IOA Activity Mix Should Extend Beyond Knowledge Giving

Greater enrichment of IOA outcomes for both the university and the schools came when there was mutual engagement in problem-solving and development activities beyond course work and workshops.

Faculty cannot expect such efforts to be fully appreciated and to be fully successful if they are always delegated to graduate students, even though the use of graduate students appropriately extends the service capability of the faculty and provides an important avenue for graduate training.

10.5.4 Research Orientation and Scientific Knowledge Building Function of the University Should Not Be Abdicated in the IOA Context

It is perhaps a telling observation that none of the IOAs studied has ever made a serious attempt to study itself. IOA operations could arguably be improved through some systematic self-analysis. Furthermore, none of the IOAs studied has been used for the generation of research knowledge on schooling or practice improvement in recent times. In bold contrast was the historic Council at Eastern Private from which a long stream of dissertations, monographs, and books was generated over a thirty year period from 1940 to 1970. It was claimed that school districts will no longer tolerate what is seen as "exploitation" of their staff by university data collectors, but this may be partly a matter of establishing the right kind of bargain. In the old Council there were substantial and multiple benefits to the school districts not only from the results of studies (which showed comparatively the number and type of innovation going on among member districts) but from the participation of their own staffs in the data collection process. Perhaps the time is at hand for us to consider how such mutually beneficial relationships which advance the state of knowledge can be configured in the 1980's context.

10.6 IMPLICATIONS FOR SCHOOL DISTRICTS

School districts generally do not initiate relationships with universities. It is probably fruitless to speculate on why this might be the case, but it is important to point out that schools should be aware of the tremendous potential that most universities represent for them. The IOA is one significant opportunity for tapping that potential. For those schools and districts that are afforded this opportunity there are a few things to keep in mind which might enhance the experience.

10.6.1 Look beyond Courses and Workshops

The IOA and the access it provides to university talent should be viewed broadly by school districts as a vehicle for practice improvement and even system improvement. The first step may well be participation in workshop activities but these should be viewed as ways of initiating linkage which can go on to more elaborate and intensive forms of collaboration.

10.6.2 Encourage Substantive Involvement for Levels Other than Teachers

As long as the IOA is perceived by administrators as a teacher-only enterprise the chances for systemic change will be minimal. Involvement of community and administrative personnel has several advantages. It increases the chances of more serious university involvement; it raises the perceived importance of participation for teachers; and it increases the chances for long-term support.

10.6.3 Give Teachers the Chance to Get Involved in a Sustained Way

There is a tendency for administrators facing budget constraints to be stingy with release time for IOA-type activities. The result has been either scatter shot influence through sporadic attendance and the channeling of teachers into traditional course frameworks which give formal credits but minimize system impact and personal growth. Where teachers and other staff are allowed and encouraged to involve themselves in continuing projects, the pay offs seem to be substantially greater.

10.6.4 If the IOA Works, It Deserves Long Term Support

Most IOAs are likely to begin as "temporary systems" under inspired leadership and with short-term support from the university and third parties. If the schools begin to see results that they like, they should begin to address the institutionalization issue. They should consider how to sell participation to their boards, how to provide the right kinds of locations and facilities, and how to factor the support of the arrangement into their annual budgets. For reasons already indicated, much of the long term support is going to have to come from the districts themselves because the university will not have either the resources or the motivation to invest heavily on a continuing basis and third party funders are likely to continue the "pump-priming" philosophy.

10.7 IMPLICATIONS FOR THOSE WHO CONTEMPLATE GETTING INVOLVED IN THIS KIND OF WORK

10.7.1 There Is an Overload Problem

For IOAs that are working there is a special curse to success. The diversity of objectives, the variety of activities, and the need to be continuously responsive all take their toll on the hide of the coordinators and their most dedicated staff. At the Eastern Private site during the most dynamic period of the revival there were persistent comments about possible "burn out", exhaustion alongside exhilaration. Clear structuring and delimitation of roles and expectations might eliminate this problem, but it might also render the IOA lifeless.

10.7.2 There Is a Problem of Marginality

One endemic problem of IOAs is the tendency to be seen either as an "extra" or as something belonging to the other institution. At Three Rivers the orphaned status of the center was a severe problem especially in the first two years of development. At Eastern Private the Council was seen as something off to the side. At Cardon County there was a problem of isolation that had to be overcome. At Arcadia the center was seen as marginal to the college at the early stages and only gradually earned its central position. The solution to the marginality problem is, first, recognition, and then deliberate steps to lessen it or avoid it by giving the IOA an institutional home and making sure it has secure connections with persons with both clout and insider status, preferably at both the college and the school ends.

10.7.3 Consider the University's Dominant Norms before Proceeding

Some universities will provide far more hospitable sites for IOA development than others. The extent to which there have been past links with the schools, the levels, variety, and depth of these contacts, and the attitudes that remain as residuals of such contacts will be telling evidence of future promise. Generally, there must be some level of localite service orientation on the part of the university evidenced at both the administrative and faculty levels.

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These attributes were manifest at all of our sites but they were clearly strongest at Arcadia College, clearly weakest at Eastern Private.

10.7.4 Consider Your Own Position, Clout, Energy Level, and Homophily with Those You Intend to Serve

We have spoken at many times in this text about the importance of various leadership attributes in bringing off a successful IOA enterprise. Leading the list is probably energy, i.e. the special inspirational quality that energizes the self and creates followers of almost equal enthusiasm. Loveland at Eastern Private probably had these qualities as convincingly as anyone in our case studies and they enabled her to bring off the revival against odds in the face of initial indifference in many quarters. Loveland also had homophily, i.e. the experience of being both a former classroom teacher and a respected tenured professor. She was also able to appreciate the needs and concerns of school administrators, inspiring great confidence in some key superintendents in the region. There would appear to be a limited supply of such individuals, but sometimes they pop up in surprising places when the opportunity is there, and sometimes an inspirational leader manages to inspire similar qualities in one or two followers. Again in the case of Loveland we saw some of this happening.

10.7.5 Consider What's in It for the Schools, for the University, for the IOA Staff and for You

The IOA has to represent a bargain in which everybody gives and everybody gets. Moreover there should be a reasonable balance between the giving and the getting, at least in the long run or in the subjective perceptions of the parties involved. The least of these benefits and costs are the financial ones. Pride, comfort, fellowship, and a sense of accomplishment are all probably important. Arcadia worked partly because the center was just a very nice place to go: no threats, interesting people to talk to if and when you want, a big candy store of educational materials to brouse through, and some side shows like student teachers taking on groups of kids with this or that innovative approach, side shows that you could look in on unobtrusively or not as you pleased. Eastern Private provided participants the chance to hear and to meet first hand some of the big names of educational research and theory and to do so again the relaxed surroundings of an old mansion on a magnificent estate. These are all reward factors of significance to someone.

10.8 SOME NEEDED PRODUCTS THAT MIGHT ASSIST IOA DEVELOPMENT

It is striking that every person who starts out on the development of an IOA is like a pioneer in the forest. There is little to guide him and nothing in the way of tools and machinery which can be relied on. Projects like the present one should lead in this direction, but there probably should be a development process to translate the wisdom of these observations into practical hands-on tools for practitioners.

10.8.1 Handbook of Alternative Activities

"How-to-do-it" books have their limitations, but good ones based on real experiences and empirical evidence of past efforts can be very useful. Loveland had her fledgling staff read up on networking studies in the early stages and some reported that this was helpful in their work, but a handbook, especially one for educators dealing with the special problems of school-university relations, one which identifies important pitfalls and points the way to stronger linkages , deeper impacts, and more secure continuation prospects could be a very important tool.

10.8.2 Formative Evaluation Methods and Instruments

Other than this project evaluations of these IOAs for formative or other purposes were either weak or non-existent. With so many activities under way and so few resources this may not be very surprising,but it is unfortunate just the same for a variety of reasons. For one thing, absence of validation gives poor guidance either to educators elsewhere or to decision makers locally regarding the desirability and cost effectiveness of such enterprises. But of equal importance is the fact that those directly involved have no empirical guidance on what they should do to improve their operations. Development of methodologies and instruments especially suited to the circumstances described in these case studies, coupled with some encouragement of their use, could make a significant difference for these and other IOA pioneers.

10.8.3 A Resource File of IOA Veterans

We are greatly impressed by the collective wisdom of those we interviewed for these studies who have fought the battles to establish and continue university-school collaboratives. The unfortunate aspect is that such wisdom has not been collected. What one pioneer has done or is doing is totally unknown to pioneers elsewhere. What is needed is some sort of consultancy bank or resource file of persons who have had such experiences and are willing to share what they know with others. If such a file could be cross-referenced for types of universities, relationships, and problems faced, so much the better.

10.9 IMPLICATIONS FOR RESEARCH

While not offering a full research agenda, we would like to conclude with a few suggestions for future studies and the way they should be conducted.

10.9.1 Case Studies Are Still the Method of Choice for IOA Research

With phenomena of this complexity at this stage of development of social research methods, there is no reasonable alternative to a case study methodology. The trouble is that there is no one way to do a good case study, and to some extent each unique situation requires its own special method. To the extent that this happens, comparison is made more difficult.

10.9.2 Refine Case Study Methodology

We began this project with an extremely ambitious study design involving several different data collection procedures and a very large number of concepts and variables. It proved to be much too ambitious. Cross-case analysis was inordinately complicated and ultimately unsatisfactory, and the individual cases were much too long. What is needed is a much simpler approach which can capture enough of what has gone on to provide a readable and convincing narrative. At the same time we must not give up the struggle for comparability. This means (a) a common conceptual framework, (b) discovery of particular instances within each case that are truly similar and comparable to situations in other cases, and (c) quantification where possible and appropriate. Quantification is probably most crucial in assessing outcomes.

10.9.3 Can an IOA Be Built from Scratch?

Moving to substantive questions, we are struck by the fact that each of these IOAs had a very important pre-history of collaborations which seemed to be the basis of what happened later, sometimes in a more formalized way. The question then remains: can such arrangements be developed de novo? If so, what special kinds of supports and incentives are needed in that circumstance?

10.9.4 Can Effective Leadership Be Created?

When a study finds that leadership is a critical variable, it leaves a dilemma for policy makers who would want to initiate similar ventures. Can such leaders be selected and/or trained or do we have to wait for them to emerge? More research on the special qualities of educational entrepreneurship are needed, particularly aimed at how such individuals can be trained.

10.9.5 Can We Improve on the Performance of Existing Arrangements?

In General we are impressed by the performance of these IOAs, but some of them seemed to do much better than others in certain respects and none of the contemporaries have matched either the research productivity or the system-wide influence that characterized the original Council at Eastern Private. It would seem that the collective wisdom mentioned earlier could be put into a quasi-experimental research and research utilization effort to attempt, systematicly, to improve the performance of university-school collaboratives including those that we studied.

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